

3. ENVIRONMENTAL SETTING AND EVALUATION OF POTENTIAL IMPACTS

PURPOSE AND LEGAL BASIS FOR THE INITIAL STUDY

As a public disclosure document, this Initial Study also provides local decision makers and the public with information regarding the environmental impacts associated with the proposed project. According to Section 15063 of the CEQA Guidelines, the purpose of an Initial Study is to:

1. Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration.
2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration.
3. Assist in the preparation of an EIR, if one is required by:
 - a. Focusing the EIR on the effects determined to be significant,
 - b. Identifying the effects determined not to be significant,
 - c. Explaining the reasons for determining that potentially significant effects would not be significant, and
 - d. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.
4. Facilitate environmental assessment early in the design of a project.
5. Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment.
6. Eliminate unnecessary EIRs.
7. Determine whether a previously prepared EIR could be used with the project.

INITIAL ENVIRONMENTAL CHECKLIST

Following each major category in the Initial Study, there are four determinations by which to judge the project's impact. These categories and their meanings are shown below:

“No Impact” means that it is anticipated that the project will not affect the physical environment on or around the project area. It therefore does not warrant mitigation measures.

“Less-than-Significant Impact” means the project is anticipated to affect the physical environment on and around the project area, however to a less-than-significant degree, and therefore not warranting mitigation measures.

“Less than Significant with Mitigation Incorporated” applies to impacts where the incorporation of mitigation measures into a project has reduced an effect from “Potentially Significant” to “Less Than Significant”. In such cases, and with such projects, mitigation measures will be provided including a brief explanation of how they reduce the effect to a less-than-significant level.

“Potentially Significant Impact” means there is substantial evidence that an effect is significant, and no mitigation is possible.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, including several impacts that are “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

Aesthetics	Agriculture and Forestry Resources	<input checked="" type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	Geology / Soils
Greenhouse Gas Emissions	Hazards & Hazardous Materials	Hydrology / Water Quality
Land Use / Planning	Mineral Resources	<input checked="" type="checkbox"/> Noise
Population and Housing	Public Services	Recreation
Transportation / Traffic	Tribal Cultural Resources	Utilities / Service Systems
<input checked="" type="checkbox"/> Mandatory Findings of Significance		

EVALUATION OF POTENTIAL IMPACTS

Responses to the following questions and related discussion indicate if the proposed project would have or would potentially have a significant adverse impact on the environment, either directly or indirectly, or individually or cumulatively with other projects. All phases of project planning, implementation, and operation are considered. Mandatory Findings of Significance are located in Section XIV below.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

The proposed Ella Way Well project would be located in the City of Citrus Heights at the south end of Ella Way. The project site is situated in an existing neighborhood characterized by single-family and multi-family development, and planned surrounding land uses would continue to be residential in nature.

The proposed project site would be composed of a single parcel (see Figure 3b, Parcel B) of approximately 0.55 acres. The project site is currently undeveloped, and is surrounded by privately owned residential parcels (see Figure 2). The site is vegetated with both native and introduced tree species. Thirteen native trees grow along the northern, eastern, and southern boundaries of the well parcel.

The project site and surrounding region are flat, with little variation in topography. Because of this, views to and from the site beyond existing fences are limited to the short-range. Medium- and long-range views are blocked by intervening vegetation and developed uses. Additionally, the proposed pump station building and fencing would be approximately 22-feet by 33-feet, and 14-feet high, and constructed with a scale and character that would be appropriate within a residential neighborhood to nearby residents.

The proposed pump station building to contain the well and appurtenances would be situated near the center of the site. The interior of the site would be graded and surfaced as part of the project's construction to install the drainage system, building foundation and pad. An eight-foot high masonry block or concrete panel wall would be installed along the east and south site boundaries. A masonry block or concrete panel wall would enclose much of the north boundary, and welded steel fencing would be installed at the access driveway adjacent to the southernmost point of Ella Way. An interior welded steel fence would serve to separate the graded site from the western portion of the site that is subject to the IOD to the City of Citrus Heights. The planned structure would be similar to that constructed by the CHWD at the Skycrest Well site, and would be designed to not detract from the residential character of the site and neighborhood.

Access is proposed from Ella Way to the north. Gates for vehicular access would be installed within the fencing at the southern end of Ella Way.

No designated scenic resources or scenic highways are located in the project vicinity, nor are such resources visible to or from the site (Caltrans 2011; Sacramento County 2011).

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Questions Ia and Ic: Less-than-significant Impact. Implementation of the proposed Ella Way Well project would result in a change in the scenic character of the site, converting an undeveloped parcel to a well and pump station. Because no scenic vistas are within the viewshed of the project, and the project is not within a scenic view, implementation of the proposed project would not interfere with scenic vistas or adversely effect visual character or quality. This would be a less than significant impact, and no mitigation would be needed.

Question Ib: No Impact. There are no state or locally designated scenic highways in the vicinity of the proposed project. Thus, implementation of the project would not adversely affect scenic resources within a designated scenic highway. There would be no impact, and no mitigation would be necessary.

Question Id: Less-than-significant Impact. Street lighting is provided on Ella Way. Although there is no night lighting on the project site, urban residential levels of night lighting occur in the vicinity of the site. Additionally, parking lot lighting for the multi-family development to the east provides additional sources of residential night lighting.

Lighting proposed for the project would include temporary lights employed during the continuous work associated with well drilling. The temporary lighting would consist of hazard lights and a lighted drilling platform. Lighting during the construction period would be temporary in nature, and the brightest lighting would be confined to a period of several days during the drilling of the well.

A pole-mounted site light fixture would be installed to the interior of the site to be used in the event that illumination is needed for operations and maintenance activities. The site light fixture would be equipped with shields to limit the amount of light going off site. Similarly, area lights would be mounted to the sides of the building, including adjacent to the building entrances. The pole-mounted light fixture and area lights would be manually operated as necessary only when CHWD personnel are at the site. The pole containing the site light would also contain a directional antenna for supervisory control and data acquisition (SCADA) and a security camera directed at the site.

Therefore, the lighting associated with the project would not introduce a substantial, permanent change from the urban light levels already experienced in the area, no significant impact would occur, and no mitigation would be required. Temporary sound walls would be employed during the period of continuous well drilling and these walls would serve to attenuate impacts from the lights employed, as well as the noise generated during this period.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES – Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined in Public Resources Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

The proposed project site is located in a low-density residential neighborhood within the urbanized City of Citrus Heights. The Department of Conservation (DOC) Farmland Mapping and Monitoring Program designates the project site as Urban and Built-Up Land (DOC 2016). No portion of the project site is identified as prime farmland, unique farmland, or farmlands of statewide importance. The project site is not zoned for agricultural use, nor is it subject to a Williamson Act contract (Citrus Heights 2011, Lloyd, J.D. et al 1986). The site of the proposed project is not in an area zoned as forest land or timberland production.

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Questions IIa and IIb: No Impact. The project site is designated as Urban and Built-Up Land, and is not subject to a Williamson Act contract. Because the proposed project would not convert designated farmland to a non-agricultural use, and because it would not conflict with agricultural zoning or a Williamson Act contract, there would be no impact. No mitigation would be required.

Questions IIc through IIe: No Impact. The proposed project site is not zoned for forest lands or timberland production, and no such lands exist on the project site or in the vicinity. Because the proposed project would not conflict with any existing forest land or timberland productions zoning, and no changes associated with the project are proposed that would result in the conversion of existing forest land or timber lands, no impact would occur. No mitigation would be required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?			X	

ENVIRONMENTAL SETTING

The U.S. Environmental Protection Agency (EPA) has set National Ambient Air Quality Standards (NAAQS) for ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, respirable particulate matter (PM₁₀), and airborne lead. Similarly, the California Air Resources Board (ARB) has established State Ambient Air Quality Standards (SAAQS) to protect public health and welfare. The ARB is responsible for control program oversight activities, while regional Air Pollution Control Districts and Air Quality Management Districts are responsible for air quality planning and enforcement. The ARB is also responsible for assigning air basin attainment and non-attainment designations for state criteria pollutants.

The Ella Way Well site lies within the Sacramento Valley Air Basin (SVAB) in northeastern Sacramento County. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for implementing emissions standards and other requirements of federal and state laws in the project area.

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. Environmental Protection Agency (EPA) established national ambient air quality standards (NAAQS) in 1971 for six air pollution constituents. States have the option to add other pollutants, to require more stringent compliance, or to include different exposure periods. California ambient air quality standards (CAAQS) and NAAQS are listed in Table 1.

Table 1 Federal and California Ambient Air Quality Standards and Attainment Status			
Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Ozone (O ₃)	8-hour	0.07 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³) ^a
	1-hour	0.09 ppm (180 µg/m ³)	--- ^b
Respirable Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	---
Fine Particulate Matter (PM _{2.5})	24-hour	---	35 µg/m ³
	Annual Average	12 µg/m ³	12 µg/m ³
Carbon Monoxide	8-hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide	Annual Average	0.03 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
	1-hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)
Lead	30 day Average	1.5 µg/m ³	---
	Rolling 3-Month Average	---	0.15 µg/m ³
	Quarterly Average	---	1.5 µg/m ³
Sulfur Dioxide	24-hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas)
	3-hour	---	---
	1-hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)
Sulfates	24-hour	25 µg/m ³	No Federal Standard
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m ³)	No Federal Standard
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m ³)	No Federal Standard

Notes: ppm = parts per million; mg/m³ = milligrams per cubic meter; µg/m³ = micrograms per cubic meter

Shaded areas indicate that Sacramento County is in non-attainment for that air pollutant standard

a On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

b 1-Hour ozone standard revoked effective June 15, 2005, although some areas have continuing obligations under that standard (“anti-backsliding”).

Source: ARB 2016, EPA 2016, EPA 2017a.

State and national air quality standards consist of two parts: an allowable concentration of a pollutant, and an averaging time over which the concentration is to be measured. Allowable concentrations are based on the results of studies on the effects of the pollutants on human health, crops and vegetation, and, in some cases, damage to paint and other materials. The averaging times are based on whether the damage caused by the pollutant is more likely to occur during exposures to a high concentration for a short time (i.e., one hour), or to a relatively lower average concentration over a longer period (i.e., eight hours, 24 hours, or one month). For some pollutants, there is more than one air quality standard, reflecting both its short-term and long-term effects.

The ARB is required to designate areas of the state as attainment, non-attainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “non-attainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An “unclassified” designation signifies that data does not support either an attainment or non-attainment status. An area where the standard for a pollutant is exceeded is considered in non-attainment and is subject to planning and pollution control requirements that are more stringent than normal requirements. The California Clean Air Act (CCAA) divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category. Table 1 summarizes the attainment status of Sacramento County. Of the criteria pollutants, the project area is in non-attainment for federal and state ozone, state PM₁₀, and federal PM_{2.5} standards.

Ozone is not emitted directly into the environment, but is generated from complex chemical reactions between ROG, or non-methane hydrocarbons, and NO_x that occur in the presence of sunlight. ROG and NO_x generators in Sacramento County include motor vehicles, recreational boats, other transportation sources, and industrial processes.

PM₁₀, or inhalable particulate matter, is a complex mixture of primary or directly emitted particles, and secondary particles or aerosol droplets formed in the atmosphere by precursor chemicals. The main sources of fugitive dust are unpaved roads, paved roads, and construction. Additional sources of PM₁₀ include fires, industrial processes, mobile sources, fuel combustion, agriculture, miscellaneous sources, and solvents.

PM_{2.5} is atmospheric particulate matter having a particle size less than 2.5 microns (µm) in diameter. These particles are so small they can be detected only with an electron microscope. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes.

Air Quality Monitoring

The area’s air quality monitoring network provides information on ambient concentrations of air pollutants in the SVAB. SMAQMD operates a monitoring station in Folsom, near the project area, where air quality data for ozone was obtained. Data for PM₁₀ and PM_{2.5} was obtained from another site in Sacramento County. Table 2 compares a five-year summary of the highest annual criteria air pollutant emissions collected at these monitoring stations with applicable SAAQS, which are more stringent than the corresponding NAAQS. Due to the regional nature of these pollutants, O₃, PM_{2.5}, and PM₁₀ are expected to be fairly representative of the project site.

As indicated in Table 2, ozone and PM₁₀ standards have been exceeded over the past 5 years.

Table 2 Ambient Air Quality Monitoring Data Measured at the Citrus Heights Area Monitoring Stations

Pollutant Standards	2012	2013	2014	2015	2016
1-Hour Ozone (Folsom - Natoma Street)					
Maximum 1-hour concentration (ppm)	<u>0.122</u>	<u>0.114</u>	<u>0.100</u>	<u>0.114</u>	<u>0.111</u>
Days Exceeding ^a CAAQS 1-hour (>0.09 ppm)	19	5	7	3	6
8-Hour Ozone (Folsom - Natoma Street)					
National maximum 8-hour concentration (ppm)	<u>0.105</u>	<u>0.087</u>	<u>0.084</u>	<u>0.093</u>	<u>0.094</u>
State maximum 8-hour concentration (ppm)	<u>0.106</u>	<u>0.087</u>	<u>0.085</u>	<u>0.093</u>	<u>0.095</u>
Days Exceeding ^a NAAQS 8-hour (>0.075 ppm)	38	6	14	5	13
Days Exceeding ^a CAAQS 8-hour (>0.070 ppm)	53	16	34	11	23
Particulate Matter (PM₁₀) (Del Paso Manor)					
National max. 24-hour concentration (µg/m ³)	41.0	56.0	40.0	42.0	31.0
State maximum 24-hour concentration (µg/m ³)	43.0	<u>63.5</u>	42.8	<u>51.4</u>	42.2
State max. 3-year average concentration (µg/m ³)	<u>21</u>	<u>23</u>	<u>23</u>	<u>23</u>	19
State annual average concentration (µg/m ³)	15.8	<u>23.2</u>	18.8	18.0	17.6
Days Exceeding ^a NAAQS 24-hour (>150 µg/m ³)	0	0	0	0	0
Days Exceeding ^a CAAQS 24-hour (>50 µg/m ³)	0	12.3	0	0	0
Particulate Matter (PM_{2.5}) (Del Paso Manor)					
National max. 24-hour concentration (µg/m ³)	35.3	<u>53.8</u>	32.0	<u>54.4</u>	<u>46.8</u>
State maximum 24-hour concentration (µg/m ³)	45.7	59.5	39.5	54.5	57.5
State annual average concentration (µg/m ³) ^c	9.2	11.5	8.8	10.4	9.8
Days Exceeding ^a NAAQS 24-hour (>35 µg/m ³)	0.0	13.0	0.0	8.7	3.3

Notes: Underlined Values in excess of applicable standard. ppm = parts per million / µg/m³ = micrograms per cubic meter.

CAAQS = California ambient air quality standards. NAAQS = national ambient air quality standards.

“-“ = insufficient data available to determine the value.

2016 is the latest year of data available as of preparation of this section (March 2018)

a. An exceedance is not necessarily a violation.

Sources: California Air Resources Board 2018. Air Quality Trend Summaries. Accessed at <www.arb.ca.gov/adam>.

SMAQMD Rules and Regulations

All projects are subject to SMAQMD rules in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

- Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general

types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc.) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a California Air Resources Board portable equipment registration (PERP) (see Other Regulations below).

- Rule 402: Nuisance. The developer or contractor is required to prevent dust or any emissions from onsite activities from causing injury, nuisance, or annoyance to the public.
- Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities, storage or any other construction activity to prevent airborne dust from leaving the project site.
- Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.
- Rule 453: Cutback and Emulsified Asphalt Paving Materials. This rule prohibits the use of certain types of cut back or emulsified asphalt for paving, road construction or road maintenance activities.
- Rule 460: Adhesives and Sealants. The developer or contractor is required to use adhesives and sealants that comply with the volatile organic compound content limits specified in the rule.

Other Regulations (California Code of Regulations (CCR))

- 17 CCR, Division 3, Chapter 1, Subchapter 7.5, §93105 Naturally Occurring Asbestos: The developer or contractor is required to notify SMAQMD of earth moving projects, greater than 1 acre in size in areas “Moderately Likely to Contain Asbestos” within eastern Sacramento County. The developer or contractor is required to comply with specific requirements for surveying, notification, and handling soil that contains naturally occurring asbestos.
- 13 CCR, Division 3, Chapter 9, Article 5, Portable Equipment Registration Program: The developer or contractor is required to comply with all registration and operational requirements of the portable equipment registration program such as recordkeeping and notification.
- 13 CCR, Division 3, Chapter 9, Article 4.8, §2449(d)(2) and 13 CCR, Division 3, Chapter 10, Article 1, §2485 regarding Anti-Idling: Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes. These apply to diesel powered off-road equipment and on- road vehicles, respectively.

Significance Thresholds

The SMAQMD has published thresholds of significance for new projects (SMAQMD 2017), which are used to determine whether the potential air quality impacts of a proposed project are significant. The SMAQMD procedure is to quantify pollutant emissions from a project and compare the results to the significance threshold. Table 3 summarizes applicable thresholds of significance for criteria pollutants.

Pollutant	Construction Phase	Operational Phase
ROGs	NONE	65 pounds per day
NOx	85 pounds per day	65 pounds per day
PM ₁₀	Zero (0). If all feasible BACT/BMPs are applied, then 80 pounds/day and 14.6 tons/year	
PM _{2.5}	Zero (0). If all feasible BACT/BMPs are applied, then 82 pounds/day and 15 tons/year	

Source: Sacramento Metropolitan Air Quality Management District 2017.

Additionally, the SMAQMD requires that emissions concentrations from all phases of project activities not exceed the applicable CAAQS. A project is considered to contribute substantially to an existing or projected violation of a CAAQS if it emits pollutants at a level equal to or greater than five percent of the applicable CAAQS.

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Potential air quality impacts are assessed for both construction and operational phases of the Ella Way Well project:

- Construction – well drilling, site grading, and building of structures and roadways
- Operations – employee trips

Questions IIIa and IIIc - Construction NOx Emissions: Less-than-significant Impact. The SMAQMD has developed a screening process to assist in determining if NOx emissions from constructing a project in Sacramento County would exceed the District’s construction significance threshold for NOx. Construction of a project that does not exceed the screening level and meets all the screening parameters will be considered to have a less-than-significant impact on air quality. However, all construction projects regardless of the screening level are required to implement the District’s Basic Construction Emission Control Practices. (SMAQMD 2017)

Projects that are 35 acres or less in size generally will not exceed the District’s construction NOx threshold of significance. This screening level was developed using default construction inputs in the California Emissions Estimator Model (CalEEMod). This screening level cannot be used to determine if a project’s construction emissions will have a less-than significant impact on air quality unless all of the following parameters are met. The project *does not*:

- Include buildings more than 4 stories tall;
- Include demolition activities;
- Include major trenching activities;
- Have a construction schedule that is unusually compact, fast-paced, or involves more than 2 phases (i.e., grading, paving, building construction, and architectural coatings) occurring simultaneously;
- Involve cut-and-fill operations (moving earth with haul trucks and/or flattening or terracing hills); and
- Require import or export of soil materials that will require a considerable amount of haul truck activity (SMAQMD 2017).

In the case of the proposed Ella Way Well, the project site is 0.55 acres. While there would be some grading and fill to bring the site up to grade to match the adjacent residential sites, because of the small size of the site and relatively minimal amount of fill and associated truck trips required, the project would meet SMAQMD screening criteria. Thus, implementation of the project would not result in construction NOx emissions in excess of SMAQMD significance criteria. This would be a less-than-significant impact.

Questions IIIb and IIIc - Construction PM₁₀ and PM_{2.5} Emissions: Less-than-significant Impact with Mitigation. During typical construction projects the majority of particulate matter emissions (i.e., PM₁₀ and PM_{2.5}) are generated in the form of fugitive dust during ground disturbance activities, most of which is generated during the grading phase. PM emissions are also generated in the form of equipment exhaust and re-entrained road dust from vehicle travel on paved and unpaved surfaces.

The SMAQMD uses the same screening level as the NOx emission screening level to assist a lead agency in determining if PM emissions from constructing a project in Sacramento County will exceed the District's construction significance thresholds for PM₁₀ and PM_{2.5}. Construction of a project that does not exceed the screening level, meets all the screening parameters, and implements the SMAQMD's Basic Construction Emission Control Practices (also known as BMPs) would be considered to have a less-than-significant impact on air quality. (SMAQMD 2017)

In the case of the proposed Ella Way Well, the project meets the SMAQMD screening parameters as set forth above. However, to meet SMAQMD requirements, CHWD must implement all of the District's Basic Construction Emission Control Practices. Implementation of the following mitigation measure would ensure that SMAQMD Practices would be implemented during project construction, and this impact would be less than significant after mitigation.

Mitigation Measure 1

All projects are subject to SMAQMD rules in effect at the time of construction. Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff. CHWD shall implement, or require its contractors to implement, all of the following measures as identified by SMAQMD:

Basic Construction Emission Control Practices

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

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- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
 - Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Questions IIIa through IIIc - Ozone and Particulate Operational Emissions: Less-than-significant Impact. In order to support the use of the SMAQMD's non-zero thresholds of significance for operational PM emissions, the SMAQMD provides guidance on Best Management Practices (BMPs) to reduce operational PM emissions from land use development projects. Since operational emissions would result only from six employee trips per month, none of the operational BMPs would apply.

The District has developed screening levels to help lead agencies analyze operational ROG, NO_x, and PM₁₀, and PM_{2.5} emissions from projects in Sacramento County. As provided by the District, the screening levels shall not be used to evaluate operational emissions from projects that have one or more of the following characteristics:

- The project will include wood stoves or wood-burning appliances;
- The project does not include BMPs for PM emissions;
- Project trip generation rates are expected to be greater than the default trip rates in CalEEMod. The default trip rates in CalEEMod, which can be viewed in the Operational-Mobile Vehicle Trips tab, are based on standard rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual;
- The vehicle fleet mix for the project is expected to be substantially different from the average vehicle fleet mix for Sacramento County. For example, the fleet mix associated with an industrial land use project will likely consist of a high portion of heavy-duty trucks;
- The project will include mixed-use development; or
- The project will include any industrial land use types (possibly including stationary sources of emissions).

Except for vehicle fleet mix, the Ella Way Well project would not include any of the disqualifying characteristics cited above. While the vehicle fleet mix would be substantially different from the average fleet mix for Sacramento County, since larger trucks would be used by employees, the proposed Ella Way Well would generate only six (6) employee trips per month, and the pump and associated facilities would be powered by electricity. Emissions for a similar well project proposed by CHWD assessed in 2006 determined that emissions from the well and site maintenance activities would be approximately 2.5 percent or less of the applicable SMAQMD significance criteria in effect at the time for ROG, NO_x, and PM₁₀. Thus, implementation of the project would not result in operational emissions in excess of SMAQMD significance criteria. This would be a less-than-significant impact, and no mitigation would be necessary.

Questions IIIb, d: CO Emissions: Less-than-significant Impact. The SMAQMD has developed a screening process to assist in determining if CO emissions from operations of a project in Sacramento County would exceed the District's operational significance threshold for CO.

Operation of a project that does not exceed the screening level and meets all the screening parameters will be considered to have a less-than-significant impact on air quality.

The proposed project will result in a less-than-significant impact to air quality for local CO if:

- Traffic generated by the proposed project will not result in deterioration of intersection level of service (LOS) to LOS E or F; and
- The project will not contribute additional traffic to an intersection that already operates at LOS of E or F. (SMAQMD 2017)

The project site of the proposed Ella Way project is located in a residential neighborhood. The proposed well would be unstaffed except for infrequent visits by maintenance or operations personnel, and no nearby intersections would be affected by the proposed project. Thus, according to SMAQMD screening criteria, the project would be expected to result in less-than-significant CO emissions. This would be a less-than-significant impact, and no mitigation would be necessary.

Question III d - Diesel Engines: Less-than-significant Impact. Emergency power would be provided by a portable diesel generator that would be brought to the site for testing and in the event of a sustained power outage. CHWD does not plan to install a stationary or portable diesel backup power system at the Ella Way Well site. Rather, CHWD intends to use rental equipment in the case of an emergency or prolonged power outage. The CHWD may periodically test borrowed equipment at the Ella Way Well site to maintain connections in good working order and/or to train CHWD personnel in the operation of the generator.

Diesel particulate matter (PM) was identified by the ARB as a toxic air contaminant in 1998. To reduce public exposure to diesel PM, the ARB adopted control measures to reduce diesel PM. Airborne Toxic Control Measures (ATCM) have been adopted to reduce emissions of diesel PM from numerous sources, including portable diesel engines, such as the project's backup generator. However, ARB permits portable engines used for emergency purposes only, including appropriate maintenance and testing, to meet reduced permitting and reporting standards. Such engines are required to meet stringent emissions standards, including limitations on permitted fuels, allowable types of equipment based on emissions, and retirement of non-compliant engines (ARB 2011).

Engines meeting the definition of portable equipment may choose to participate in ARB's Portable Equipment Registration Program rather than obtaining permits from local air pollution control agencies throughout the state. A portable engine operating in Sacramento County must be registered pursuant to ARB's Portable Equipment Registration Program or have a valid Permit to Operate from the SMAQMD (SMAQMD 2017b).

Implementation of the proposed project would include the intermittent use of a portable diesel backup generator in the event of an emergency or sustained power outage. While the portable diesel backup generator is considered a source of toxic air contaminants, CHWD will be required to comply with SMAQMD regulations, ARB's Diesel ATCM regulations, and State Health and Safety codes. This would be a less-than significant impact, and no mitigation would be required.

Naturally Occurring Asbestos

Naturally occurring asbestos is not a potential concern in the project area. For more information and analysis, see Section VIII, *Hazards and Hazardous Materials*.

Question IIIe – Odors: Less-than-significant Impact. During operation, the project would consist of the operation of an electrically powered pump. No odors would be generated by this use. Potential odor effects would be less than significant, and no mitigation would be necessary.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
	X		
		X	
		X	
	X		
	X		
			X

IV. BIOLOGICAL RESOURCES – Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

REGULATORY FRAMEWORK

Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) has jurisdiction over projects that may result in take of a species listed as threatened or endangered under the federal Endangered Species Act (ESA). Under the ESA (Title 16 of U.S. Code, Section 153 et seq. [16 USC 153 et seq.]), the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC 703–711) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the U.S. Secretary of the Interior. Most native bird species fall under the jurisdiction of this act.

Section 404 of the Clean Water Act

Section 404 of the Clean Water Act (33 USC 1252–1376) requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code Section 2050 et seq.) is the state policy to conserve, protect, restore, and enhance endangered or threatened species and their habitats. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of endangered or threatened species if reasonable and prudent alternatives are available that would avoid jeopardy. Definitions of endangered and threatened species in the CESA parallel those defined in the ESA. Take authorizations from California Department of Fish and Wildlife (CDFW) are required for any unavoidable impact on state-listed species resulting from proposed projects.

Native Plant Protection Act

California's Native Plant Protection Act (Fish and Game Code Sections 1900–1913) requires all state agencies to establish criteria for determining whether a species, subspecies, or variety of native plant is endangered or rare. Provisions of this act prohibit the taking of listed plants from the wild and require that CDFW be notified at least 10 days in advance about any change in land use that would adversely affect listed plants. This requirement allows CDFW to salvage listed plant species that would otherwise be destroyed.

Protection of Bird Nests and Raptors

The California Fish and Game Code (Section 3503) states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. The Code specifically mentions that it is unlawful to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs. Examples of code violations include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction.

Tree Preservation and Protection Ordinance

Chapter 106.39 of the Citrus Heights Zoning Code provides regulations for the protection, preservation, and maintenance of protected trees in the City of Citrus Heights. The ordinance protects native oak trees, oak woodlands, trees of historic or cultural significance, groves and stands of mature trees, and mature trees associated with development proposals.

No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan has been approved for the City of Citrus Heights.

ENVIRONMENTAL SETTING

The project site is bounded on the north, south, and west by existing single-family residential development. To the east, the site is bordered by multi-family residential uses.

The proposed project would be constructed on a 0.55-acre parcel that is the currently undeveloped rear portion of an existing 1.55-acre existing parcel. This front portion of the existing large parcel adjacent to Patton Avenue is developed with residential and home occupation uses. A number of native and ornamental trees are located along the north, east, and west boundaries of the 0.55-acre project site. Thirteen native trees are located on the site, including 10 oaks and three live oaks. Of these, three oaks are potentially protected by the City of Citrus Heights tree preservation and protection ordinance. The majority of the site is non-irrigated turf.

No surface water features are located within the boundary of the project site. Review of aerial photographs of the project area from 1938 through 2012 indicates that an ephemeral drainage had previously been located on the project site. However, at some time between 1972 and 1984 this channel was converted to uplands. Annual mowing and cultivation activities for property maintenance and weed control, as well as a past fire, also have adversely affected native biological resources on the project site.

ENVIRONMENTAL ANALYSIS

Research completed to determine the biological resources associated with the proposed project included: (1) a query of the California Natural Diversity Database (CNDDDB) to identify occurrences of special-status species within the Citrus Heights 7.5-Minute Topographic Quadrangles (CNDDDB 2018); (2) a query of federally listed Threatened and Endangered species from the U.S. Fish and Wildlife Service (USFWS) and the California Native Plant Society's (CNPS) Electronic Inventory; and (3) a review of the USFWS National Wetland Inventory (NWI) map to identify the presence of wetlands within the project area. The results of the database search and location analysis were used to determine if any sensitive resources had been previously reported within or in the immediate local vicinity of the project site.

This special-status species evaluation considers those species identified as having relative scarcity and/or declining populations by the USFWS or CDFW. Special-status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern by CDFW. Also included are those plant species considered to be rare, threatened, or endangered in California by the CNPS, and those plant and animal taxa meeting the criteria for listing under Section 15380 of the State CEQA Guidelines.

According to the USFWS records search, one reptile, two amphibians, one fish, one insect, and one crustacean species have been documented in the nine-quadrangle area surrounding the project site. Most of these species are associated with water features such as vernal pools, ponds, marshes, and streams. No vernal pool habitat or other appropriate water features are present on or adjacent to the project site.

The results of the CNDDDB records search show that no sensitive biological resources have been identified on or adjacent to the project site. Two insects, one fish, three birds, one crustacean, and

two plant species have been recorded in the vicinity of the project site. Given the ongoing disturbance of the project site, its location within a predominantly urban area, and the lack of water features on or adjacent to the site, it is unlikely that any of these species would be found on the project site, with the exception of several of the bird species.

Sensitive natural habitats are those that are considered rare within the region, support sensitive plant or wildlife species, or function as corridors for wildlife movement. No sensitive natural habitats were identified by the CNDDDB and CNPS lists for the proposed project area. A review of the USFWS National Wetland Inventory Map was completed to identify the presence of wetlands within the vicinity of the project. No potentially jurisdictional wetlands or wetlands of the United States were identified on or near the project site, and the site would not support jurisdictional wetlands or wetlands of the United States.

Questions IVa and IVd: Less-than-significant Impact with Mitigation. The biological habitat on the site of the proposed well has been disturbed historically by grading and mowing. While there is some drainage associated with the topography of the site, no riparian or other sensitive habitats exist on, or adjacent to the project site. No permanent or open water habitat is present on the site. In general, the on-site habitat is not identified as important to migratory species. However, native trees on the project site may provide nesting habitat for special status bird species, or species protected by the Migratory Bird Treaty Act. If construction occurred during the nesting season, nesting birds could be disturbed leading to nest abandonment.

No special status species or habitats were found to be present or have potential to be present in the project area. Implementation of the proposed project would remove a minimal amount of non-native grassland habitat for common urban species. The project as proposed would avoid all trees present on the site, and construction disturbance would only occur in areas that are currently vegetated with introduced grasses. No construction or paving would occur within the dripline of any existing tree. Because no important biological resources exist on the project site, and site construction would disturb only non-native grasses, implementation of the Ella Way Well project would have minimal impact on sensitive biological resources. Implementation of the project could, however, have an adverse impact on nesting birds. Therefore, development of the project would have a significant impact on biological resources. Implementation of Mitigation Measure 2, would ensure that nesting birds would be identified prior to the start of construction, and that appropriate mitigation would be implemented to avoid disturbance.

Mitigation Measure 2

The CHWD or the construction contractor shall schedule vegetation removal and ground-clearing activities prior to the initiation of nesting activity (March) or after fledging (August). If the CHWD determines that it is infeasible to avoid construction during the nesting season, the CHWD or the construction contractor shall conduct pre-construction surveys between March 1 and August 15 in potential nesting habitat to identify nest sites. If an active raptor nest is observed within 500 feet of the project site, CHWD shall contact CDFW for guidance and/or establish a 500-foot buffer around the nest tree. If a passerine bird nest is observed during surveys, a 100-foot buffer around the nest shall be established or consultation with CDFW shall be conducted for a reduced buffer zone based on nesting phenology, site conditions, and recommendation(s) of a biological monitor. Construction activities in the buffer zone shall be prohibited until the young have fledged.

With implementation of Mitigation Measure 2, impacts to protected bird species would be reduced to a less-than-significant level.

Question IVb and IVc: Less-than-significant Impact. Implementation of the proposed project would not have an adverse affect on any riparian habitat or sensitive natural community, since no such resources are located within the project area. There would be no substantial adverse effect on wetlands, as no wetlands occur on the project site.

Because no riparian habitat, sensitive natural communities, or wetlands exist on site, impacts to riparian habitat, sensitive natural communities, and wetlands would be considered less than significant with implementation of the proposed project, and no mitigation would be necessary.

Question IVe: Less-than-significant Impact with Mitigation. The City of Citrus Heights has established a Tree Protection Ordinance (Chapter 106.39 of the Citrus Heights Municipal Code). According to the City of Citrus Heights, “native oak trees and other mature trees six inches or greater in diameter are protected and require a permit for removal. The following native oak trees are protected and require a tree permit: valley oak, interior live oak, blue oak, or oracle oak. The following tree types are exempt from any permit process - willow, fruit, eucalyptus, alder, cottonwood, pine, catalpa, fruitless mulberry, or palm.” (Citrus Heights undated)

Thirteen native trees are located on the site, including 10 oaks and three live oaks. Of these, three oaks are potentially protected by the City of Citrus Heights Tree Preservation and Protection Ordinance. Because no formal site plans have been prepared as of the date of this Initial Study, it is unknown if implementation of the Ella Way Well project would adversely affect any jurisdictional tree on the project site. Because project implementation could result in the loss of protected trees or construction could occur within the driplines of trees to be retained, this would be a significant impact. Implementation of the Mitigation Measure 3 would ensure that qualifying trees on the project site would be protected, or that loss or disturbance of protected trees would be compensated as required by the City of Citrus Heights.

Mitigation Measure 3

During project design and construction, CHWD shall avoid jurisdictional trees, including their protected zones as defined by Chapter 106.39 of the Citrus Heights Municipal Code. The CHWD or its contractor shall implement the standard policies and procedures set forth in Section 106.39.050 of the Citrus Heights Municipal Code during the design and construction of proposed improvements. In the event that a jurisdictional tree and its protected zone cannot be avoided, CHWD or its contractor shall obtain a Tree Permit from the City of Citrus Heights, and implement all requirements of the permit.

With implementation of the above measures, protected trees would not be harmed, or if loss or disturbance of a tree were to occur, compensation as required by the City of Citrus Heights would be required. As mitigated, the project would not conflict with any local ordinances or plans. A less-than-significant impact would result, and no additional mitigation would be necessary.

Question IVf: No Impact. There are no approved or adopted Natural Community Conservation Plans or Habitat Conservation Plans (NCCP/HCP) for the project site or its vicinity. This would be a less-than-significant impact; no mitigation would be required.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
V. CULTURAL RESOURCES – Would the project:			
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X	
d) Disturb any human remains, including those interred outside of formal cemeteries?	X		

Records of the known cultural resources found in Sacramento County are included in the files of the Office of Historic Preservation, California Historical Resources Information System. The Northern California Information Center (NCIC), housed at California State University, Sacramento, locally administers these records. A cultural resources records search was conducted at the NCIC for the project site and surrounding area to determine its historic and cultural sensitivity (NCIC 2018). Non-privileged portions of the records search may be inspected at the Citrus Heights Water District, 6230 Sylvan Road, Citrus Heights, California, Monday through Friday during standard business hours.

REGULATORY FRAMEWORK

State and Federal legislation requires the protection of historical and cultural resources. In 1971, the President’s Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places. In 1980, the Governor’s Executive Order No. B-64-80 required that State agencies inventory all “significant historic and cultural site, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places.” Likewise, Section 15064.5(b) of the CEQA Guidelines specifies that “projects that cause the physical demolition, destruction, relocation, or alteration of a historical resource or its immediate surroundings such that the significance of the historic resource would be materially impaired” shall be found to have a significant impact on the environment.

According to agency definitions, implementation of the proposed Ella Way Well project would constitute an “undertaking.” CEQA requires the evaluation of the potential effects to cultural resources (i.e., historic and archaeological) that may be caused by a particular “undertaking.”

ENVIRONMENTAL SETTING

The NCIC Records Search reported that the specific project area has not been subject to previous cultural resources investigations. There are no prehistoric or historic archaeological resources on the project site or in its vicinity that have been reported to the NCIC. The location of the proposed project site is deemed to be moderately sensitive for cultural resources.

According to the USGS National Geologic Map Database, the uppermost geologic formation underlying the soils in the area of the proposed project is the Plio-Pleistocene and Pliocene loosely consolidated deposits formation. The project site is not located in an area of known paleontological resources.

ENVIRONMENTAL ANALYSIS

Questions Va, Vb, and Vd: Less-than-significant Impact with Mitigation. Results of the records search conducted by the NCIC show no recorded prehistoric or historic archaeological resources or historic building or structures on the project site or within a ¼ mile radius of the site. According to the Background Report prepared for the City of Citrus Heights General Plan, the nearest historic structure is located approximately 0.4 miles to the northeast of the project site. The Dekay/Sunrise Ranch Home was originally constructed in 1868, but it is not eligible for listing in the California Register of Historical Resources or the National Register of Historic Places due to a lack of historical integrity. (Citrus Heights 2010a) Further, the Ella Way Well project would have no impact on the Dekay/Sunrise Ranch Home.

However, project construction could result in the destruction or degradation of unknown cultural or historic resources. This would be a potentially significant impact.

The following existing regulatory requirements acting as a mitigation measure would facilitate actions to reduce potential impacts to unknown prehistoric and historic resources to a less-than-significant level.

Mitigation Measure 4

Prior to initiation of construction on the project site, CHWD shall require that any construction or improvement plans contain a notation requiring that if any archaeological, cultural, historical resources, artifacts or other features are discovered during the course of construction anywhere on the project site, work shall be suspended in that location until a qualified professional archaeologist assesses the significance of the discovery and provides consultation with CHWD staff. Appropriate mitigation for curation or protection of the resources, as recommended by the archaeologist, shall be implemented upon approval by CHWD. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

In addition, pursuant to §5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of any human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

Thus, with implementation of the above mitigation measure, no additional effects to cultural resources are expected to occur, and no additional mitigation would be necessary.

Question Vc: Less-than-significant Impact. Since the proposed project site is not located in an area of known of paleontological resources, and there are no unique geological features present within the area, no adverse effects to these resources would occur. This would be a less than significant impact, and no mitigation would be necessary.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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VI. GEOLOGY AND SOILS – Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.		X	
ii) Strong seismic ground shaking?		X	
iii) Seismic-related ground failure, including liquefaction?		X	
iv) Landslides?		X	
b) Result in substantial soil erosion or the loss of topsoil?		X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X

Soils on the site of the proposed project are classified by the United States Department of Agriculture, Natural Resources Conservation Service Web Soil Survey as Fiddyment-Orangevale-Urban land complex, 2 to 8 percent slopes (NRCS 2018). This soil type is rated as moderate for erosion hazards, and moderate for shrink-swell potential (Citrus Heights 2010b).

ENVIRONMENTAL ANALYSIS

Questions VIa and VIc: Less-than-significant Impact. The Ella Way Well project is located at the eastern margin of the Sacramento Valley, an area with low seismic activity. The City of Citrus Heights General Plan Background Report, Chapter 10, Safety states that there are no known faults within the Citrus Heights area, nor is the area within an Alquist-Priolo Special Studies Zone. The primary site hazard associated with seismic activity would involve minor ground shaking from more distant faults (Citrus Heights 2010b). The proposed project would employ standard construction practices and comply with CHWD standards, consistent with California Building Code requirements for the State of California. Standard design, construction and safety procedures would limit seismic hazards to levels deemed acceptable in the state and region. This would be a less-than-significant impact and no additional mitigation is required beyond compliance with adopted building standards.

Soil liquefaction is a phenomenon in which saturated soil loses shear strength and deforms from ground shaking during an earthquake. The Citrus Heights General Plan Background Report

indicates that the potential for soil liquefaction affecting the Citrus Heights area is low. The project site would not be located in an area with soil or saturation conditions subject to liquefaction as they generally do not exist in the project area (Citrus Heights 2010b). The project site and vicinity have nearly level topography that would not be subject to landslide hazards. A less-than-significant impact would occur, and no mitigation would be required.

Subsidence is the settling or sinking of parts of the earth's surface layer due to removal of subsurface support. Given the proper subsurface geology, the excessive pumping of groundwater could result in subsidence. However, the project site is not located within an area of any known instances of subsidence according to the City of Citrus Heights General Plan Background Report (Citrus Heights 2010b). Additionally, two long-term hydrographs within the project area indicate that groundwater elevations have not varied greatly over time. Groundwater elevations measured in the far eastern area of the CHWD have varied no more than two feet from October 1998 through 2012. (SGA 2014) Given the subsurface geology of this area of northern Sacramento County, the proposed well project would not result in a substantial increase in groundwater withdrawal that could result in localized subsidence in the project area. Thus, potential impacts from subsidence would be less than significant, and no mitigation would be required. (For additional information regarding groundwater, see Section IX, *Hydrology and Water Quality*, of this Initial Study.

Question VIb: Less-than-significant Impact. Construction of the proposed Ella Way Well project would disturb less than one acre of relatively level topography, with on-site grading to create suitable pads for the wellhead and pump building. A portion of the project site would be paved to allow access for operations and maintenance of the well, pumps, and ancillary equipment, and for construction of the wellhead and pump building. On-site soils, Fiddymont-Orangevale-Urban land complex, 2 to 8 percent slopes, exhibit slight to moderate hazards of water erosion (NRCS 2018).

In coordination with the City of Citrus Heights, all construction activities would implement stormwater pollution prevention Best Management Practices (BMP) designed to reduce potential impacts to water quality during construction of the project, and in accordance with the guidelines of the Sacramento Stormwater Management Program as follows:

- Complying with the requirements of the State Water Resources Control Board's "General Permit for Stormwater Discharges Associated with Construction Activity"¹,
- Preserving all existing vegetation on site where possible,
- Scheduling as much project work as possible during the dry season,
- Stabilizing the construction access route,
- Protecting storm drain inlets,
- Using other Best Management Practices as necessary, including applying rainy season erosion controls, managing stockpiles, disposing of well development water properly, and correctly managing and disposing of construction wastes,
- Maintaining all Best Management Practices, and
- Stabilizing the site after construction is complete.

¹ Because the project site totals 0.55 acres, the CHWD would be exempt from Submitting a Notice of Intent to the State Water Resources Control Board to comply with the General Permit for Stormwater Discharges Associated with Construction Activity due to the small size of the project. Nonetheless, the CHWD has voluntarily agreed to comply with the substantive requirements of the General Permit.

Due to the relatively flat topography, construction techniques (including the BMPs cited above), finished final surfaces, and engineered drainage systems, the project would not result in impacts to soil erosion or loss of topsoil. This would be a less-than-significant impact and no mitigation would be required.

Question VIId: Less-than-significant Impact. Shrink/swell potential refers to the soils ability to expand and contract. Shrinking and swelling of soil can damage roads, dams, building foundations, and other structures. The soil on the project site is identified as Fiddymment-Orangevale-Urban land complex, 2 to 8 percent slopes, which exhibits low to high shrink/swell characteristics. Typically, common engineering solutions can remedy potential shrink/swell hazards. For the Ella Way Well, no building structures intended for human use or occupancy would be constructed, and no unusual pad engineering conditions would be expected to affect performance or safety. This would be a less-than-significant impact and no mitigation would be necessary.

Question VIe: No Impact. Operation of facilities would not require on-site wastewater treatment or disposal. No impacts from or to soil and groundwater from septic systems would occur.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		X	
		X	

VII. GREENHOUSE GAS EMISSIONS – Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Global Warming is a public health and environmental concern around the world. As global concentrations of atmospheric greenhouse gases increase, global temperatures increase, weather extremes increase, and air pollution concentrations increase. Global warming and climate change has been observed to contribute to poor air quality, rising sea levels, melting glaciers, stronger storms, more intense and longer droughts, more frequent heat waves, increases in the number of wildfires and their intensity, and other threats to human health (IPCC 2013). With the exception of 1998, the 10 warmest years in the 137-year record of global temperatures all have occurred since 2000, with 2016 ranking as the warmest year on record (NOAA 2016). Hotter days facilitate the formation of ozone, increases in smog emissions, and increases in public health impacts (e.g., premature deaths, hospital admissions, asthma attacks, and respiratory conditions) (EPA 2016a). Averaged global combined land and ocean surface temperatures have risen by roughly 0.85°C from 1880 to 2012 (IPCC 2013). Because oceans tend to warm and cool more slowly than land areas, continents have warmed the most. If greenhouse gas emissions continue to increase, climate models predict that the average temperature at the Earth’s surface is likely to increase by over 1.5°C by the year 2100 relative to the period from 1850 to 1900 (IPCC 2013).

The Greenhouse Effect (Natural and Anthropogenic)

The Earth naturally absorbs and reflects incoming solar radiation and emits longer wavelength terrestrial (thermal) radiation back into space. On average, the absorbed solar radiation is balanced by the outgoing terrestrial radiation emitted to space. A portion of this terrestrial radiation, though, is itself absorbed by gases in the atmosphere. The energy from this absorbed terrestrial radiation warms the Earth's surface and atmosphere, creating what is known as the "natural greenhouse effect." Without the natural heat-trapping properties of these atmospheric gases, the average surface temperature of the Earth would be below the freezing point of water (IPCC 2007). Although the Earth's atmosphere consists mainly of oxygen and nitrogen, neither plays a significant role in this greenhouse effect because both are essentially transparent to terrestrial radiation. The greenhouse effect is primarily a function of the concentration of water vapor, carbon dioxide, methane, nitrous oxide, ozone, and other trace gases in the atmosphere that absorb the terrestrial radiation leaving the surface of the Earth (IPCC 2007). Changes in the atmospheric concentrations of these greenhouse gases can alter the balance of energy transfers between the atmosphere, space, land, and the oceans. Radiative forcing is a simple measure for both quantifying and ranking the many different influences on climate change; it provides a limited measure of climate change as it does not attempt to represent the overall climate response (IPCC 2007). Holding everything else constant, increases in greenhouse gas concentrations in the atmosphere will likely contribute to an increase in global average temperature and related climate changes (EPA 2016a).

Greenhouse Gases

Naturally occurring greenhouse gases include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, emitted solely by human activities. There are also several gases that, although they do not have a direct radiative forcing effect, do influence the formation and destruction of ozone, which does have such a terrestrial radiation absorbing effect. These gases, referred to here as ozone precursors, include carbon monoxide (CO), oxides of nitrogen (NO_x), and non-methane volatile organic compounds (NMVOC). Aerosols (extremely small particles or liquid droplets emitted directly or produced as a result of atmospheric reactions) can also affect the absorptive characteristics of the atmosphere.

Carbon is stored in nature within the atmosphere, soil organic matter, ocean, marine sediments and sedimentary rocks, terrestrial plants, and fossil fuel deposits. Carbon is constantly changing form on the planet through the a number of processes referred to as the carbon cycle, which includes but is not limited to degradation and burning, photosynthesis and respiration, decay, and dissolution. When the carbon cycle transfers more carbon to the atmosphere this can lead to global warming. Over the last 300 years atmospheric levels of carbon have increased by more than 30 percent, of which approximately 65 percent is attributable to fossil fuel combustions and 35 percent is attributed to deforestation and the conversion of natural ecosystems to agricultural use (Pidwirny 2006). Carbon stored in plants and rocks is referred to as being sequestered. Within the United States, forest sequestration of carbon offset approximately 13 percent of the fossil fuel GHG emissions in 2011, and from 10 to 20 percent of U.S. emissions each year (USDA 2018).

REGULATORY FRAMEWORK

The U. S. EPA is the federal agency responsible for implementing the CAA. The U.S. Supreme Court ruled on April 2, 2007 that CO₂ is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or

policies regarding GHG emissions thresholds applicable to the proposed project at the time of this Initial Study.

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the CCAA. Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long-term. Because every nation emits GHGs, and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

In September 2006, then-Governor Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. In 2011, the ARB adopted the cap-and-trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable emissions cap that will decline over time. The State will distribute allowances, which are tradable permits, equal to the emissions allowed under the cap.

The initial main strategies and roadmap for meeting the 1990 emission level reductions are outlined in a Scoping Plan approved in December 2008 and updated every five years (the Scoping Plan was updated in May 2014). The Scoping Plan includes regulations and alternative compliance mechanisms, such as monetary and non-monetary incentives, voluntary actions, and market-based mechanisms, such as a cap-and-trade program. The Climate Change Scoping Plan also includes a breakdown of the amount of GHG reductions the ARB recommends for each emissions sector of the state's GHG inventory (ARB 2014). In January 2017, ARB issued the proposed 2017 Climate Change Scoping Plan Update to reflect the 2030 target set by Executive Order B-30-15.

As the sequel to AB 32, Senate Bill (SB) 32 was approved by the Governor on September 8, 2016. SB 32 would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by former Governor Schwarzenegger in 2005 with Executive Order S-3-05.

City of Citrus Heights Greenhouse Gas Reduction Plan. The City of Citrus Heights adopted a Greenhouse Gas Reduction Plan (GGRP) in August 2011. As set forth in the Plan, GHG reduction measures in this plan are grouped within seven strategy areas –community leadership and engagement, land use and community design, transportation and connectivity, energy efficiency and conservation, water efficiency and conservation, waste reduction, green infrastructure, and public health and safety. The GHG reduction measures were developed by (a) evaluating existing community conditions, (b) identifying emissions reduction opportunities within the City of Citrus Heights, (c) reviewing best practices from other jurisdictions and organizations, and (d) incorporating state and regional laws, guidelines, and recommendations. The recommended GGRP

measures are grounded in actions directly influenced by the City of Citrus Heights and rely on community participation. (Citrus Heights 2011a)

The GGRP includes two types of measures: *primary* and *supporting* measures. *Primary* measures generate directly attributable GHG reductions based on current technology, empirical studies and available data. The GGRP recommends 19 *primary* measures that collectively meet the City of Citrus Heights' target of 10 to 15 percent below 2005 levels. A number of *supporting* measures have also been included. These measures were not quantified at the time of GGRP approval, but they facilitate and support the reduction potential of the *primary* measures. (Citrus Heights 2011a)

Although CHWD and its activities are not directly regulated by the City of Citrus Heights, the following measures of the GGRP may be appropriate to the proposed Ella Way Well project:

5-1.A - Work with the water agencies to develop plans to implement SB 7 to achieve a 20% reduction in urban water demand by 2020. (*Water consumption within the CHWD service area has decreased 21.9 percent during the period from 2013 to 2016. According to the CHWD Urban Water Master Plan [SB X7-7 Table 5], per capita water use had declined to 137 gallons per day in 2015*)

7-1.A - Enhance the City's urban forest and other green infrastructure to reduce building energy use, improve comfort, augment neighborhood aesthetics, improve stormwater quality, and maximize carbon capture and storage. (*For the proposed Ella Way Well project all of the existing native trees within and adjacent to the proposed property boundaries would be retained unless removal is recommended by a certified arborist and permitted by the City of Citrus Heights. See Section IV, Biological Resources, of this Initial Study for more information*)

Question VIIa: Less-than-significant Impact. Greenhouse gas emissions would be generated from the proposed Ella Way Well during construction and operation. Temporary GHG emissions would occur during construction activities, predominantly from vehicle and equipment exhaust. Because minimal construction (grading and paving of ~0.55 acres, construction of a well and a well storage building) is associated with the proposed project, construction related GHG emissions would be minimal, and a less-than-significant impact would result. Operational GHG emissions would occur from maintenance vehicles accessing the site and from secondary emissions associated with the well pump's electrical use. In accordance with adopted regional water management plans, the well would be used to:

- Supplement surface water entitlements in the event of a long- or short-term drought or surface water curtailment.
- Operate and maintain the underlying groundwater basin under a regional conjunctive use program.
- Enhance the reliability and redundancy of water supplies that are available to serve the CHWD's customers.
- Serve as a source of water supply in the event of a water infrastructure or water supply emergency.
- Serve as source of water supply to help meet the CHWD's maximum day and peak hour water supply needs.
- Provide price stability in anticipation of projected price increases for water purchases.
- Provide additional resources for fire flow requirements.

Because of the low-level of electricity use and the low-level of traffic associated with the project (infrequent maintenance trips), greenhouse gas emissions would not be expected to be significant, and the project would not be expected to make a substantial contribution to the cumulatively significant impact of global warming. No significant impact would result and no mitigation would be necessary.

Question VIIb: Less-than-significant Impact. The City of Citrus Heights has adopted a Climate Action Plan (the GGRP) and greenhouse gas reductions measures. The City of Citrus Heights also enforces the provisions of the Green Building Standards Code and the Energy Code adopted by the City of Citrus Heights.

Though the CHWD is not bound by the provisions of the City of Citrus Heights' GGRP, the Ella Way Well is located within the boundaries of the City of Citrus Heights and the CHWD wishes to cooperate with the City of Citrus Heights whenever possible. For this reason, the CHWD chooses to evaluate its proposed well project within the context of the City of Citrus Heights' GGRP. Under the GGRP, the Ella Way Well project would comply with the two GGRP measures identified above. Because the proposed project would be consistent with the adopted Citrus Heights GGRP, this would be a less-than-significant impact, and no mitigation would be necessary.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

Construction of the proposed project would include the use of oil, diesel fuel, paints, solvents, and other hazardous materials. During operations, well water would be disinfected with calcium hypochlorite, which would be stored on site in the pump station building.

Queries of the State Water Resources Control Board Geotracker and California Department of Toxic Substances Control Envirostor hazardous materials sites indicate that the proposed project is not located on a known hazardous materials site (CA SWRCB 2017; CA DTSC 2017). A Phase I Environmental Site Audit was completed for the proposed project site. This evaluation did not identify any hazardous materials spills or sites on or adjacent to the proposed site of the Ella Way Well. (NV5 2018)

The only school within one-quarter mile of the proposed project is the Mariposa Avenue Elementary School. The site of the proposed well is located ¼ mile from the nearest property corner

of the school site; the nearest instructional building is located 0.28 miles from the proposed well site. The proposed project is not located within an Airport Land Use Plan, and the nearest airport, Sacramento McClellan Airport, is located approximately seven miles southwest of the site. (Google 2018) There is no adopted Emergency Response Plan or Emergency Evacuation Plan for the proposed project area (Citrus Heights 2018b). The threat of wildfire hazard in the project area is determined unlikely. Should such a hazard occur, the magnitude and severity is determined to be negligible (Sacramento County 2016).

ENVIRONMENTAL ANALYSIS

Questions VIIIa: Less-than-significant Impact. Water treatment at the site would consist of disinfection of the well water using calcium hypochlorite; it would be stored and secured in solid form within the pump house building. The building would be constructed of concrete masonry block and metal roofing, and secured with perimeter fencing and/or interior fencing. Both the building and the fence would be locked, except during access by CHWD maintenance or operations personnel.

Although implementation of the proposed Ella Way Well project would result in the storage and use of calcium hypochlorite, its presence would not result in a hazard under normal operating conditions. The potential adverse effects of calcium hypochlorite are limited to skin and eye exposure during contact with the product. Because the product is secured in a fenced and locked building, inadvertent contact would be highly unlikely. Therefore, this would be a less than significant impact, and no mitigation would be necessary.

Naturally occurring asbestos has been discovered in the eastern area of Sacramento County; however, this project site is not in an area identified by the Sacramento Metropolitan Air Quality Management District as having soils that are likely to contain naturally occurring asbestos (CGS 2006). Therefore, no naturally occurring asbestos is expected in on-site soils that might be disturbed during construction. These impacts would be less than significant, and no mitigation would be required.

Question VIIIb: Less-than-significant Impact. Standard construction techniques would be used to construct the proposed groundwater production well, building pads, associated facilities and perimeter fencing. During construction, oil, diesel fuel, paints, solvents, and other hazardous materials would be used at the site. If spilled, these substances could pose a localized risk to the environment and to human health. However, all construction activities must comply with the California OSHA regulations that would protect construction workers and the environment for potential spills or releases.

Proposed operations include the storage and use of calcium hypochlorite, which would be stored in solid form in the pump building. This use is also regulated by CalOSHA.

Additionally, if the CHWD stores more than 55 gallons or 500 pounds of calcium hypochlorite at the Ella Way Well site, the District would be required to obtain a Hazardous Materials Business Plan from the Sacramento County Environmental Management Department, and comply with the requirements of the permit to avoid and control potential hazards. (Sacramento County EMD 2018). Compliance with CalOSHA and County requirements would reduce the risk of hazards related to the routine transport, use, or disposal of hazardous materials to a less-than-significant

level. The risk of hazards to the public or to environmental conditions related to accident conditions would also be reduced to a less-than-significant level. No migration would be required.

Question VIIIc: Less-than-significant Impact. Implementation of the proposed project would include a portable backup diesel generator, which would only be brought to the site for testing or in the event of a sustained power failure. This generator could be a source of diesel particulate matter (PM), which is identified by the ARB as a toxic air contaminant. Although the Mariposa Elementary School property boundary is located ¼ mile southwest of the proposed well site, the nearest area that would be occupied by students would be located 0.28 miles from the well pump station building. As noted above, implementation of the proposed Ella Way Well project would result in the storage and use of calcium hypochlorite. Under normal operating conditions its presence would not result in a hazard. The potential adverse effects of calcium hypochlorite are limited to skin and eye exposure during contact with the product. Because the product is secured in a fenced and locked building, inadvertent contact would be highly unlikely. Because of the distance from the proposed pump station building and the measures to be taken to securely store calcium hypochlorite, this would be less-than-significant impact. No mitigation would be required.

Question VIII d: No Impact. According to queries of the GeoTracker and Envirostor Data Management Systems, the project would not be located on a site identified on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. As a result, implementation of the project would not create a significant hazard to the public or the environment. No impact would result, and no mitigation would be required.

Questions VIII e and VIII f: No Impact. There are no existing airports within two miles of the proposed project site, and the site is not located in the vicinity of a private airstrip. The site facility may experience infrequent over-flights from airplanes traveling to or from regional airports; however, the project does not require or attract people to the site and does not include facilities or processes that create hazards to aircraft. The project facilities and personnel would not be exposed to or contribute to safety hazards. No impact would occur and no mitigation would be required.

Question VIII g: No Impact. Other than the construction of an access driveway from Ella Way, the project would have no effect on any roadway. Additionally, the proposed well would be unstaffed except for infrequent visits by maintenance or operations personnel. Thus, the project would not result in the modification or blockage of any evacuation route, or result in an increased concentration of large numbers of persons in an at-risk location. The facility would not impact emergency response or evacuation plans. No impact would result, and no mitigation would be required.

Question VIII h: No Impact. The project site is located in an existing low-density residential neighborhood within the City of Citrus Heights; the threat of wildland fire was determined to be unlikely (Sacramento County 2016). The proposed project site would not be located in a critical fire danger zone or adjacent to wildlands subject to wildfires. Urban levels of fire protection would be provided to the project area. The construction and operation of the project would not increase the risk of or hazards from wildland fire as no wildlands exist in the project vicinity. No impact would occur and no mitigation would be required.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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IX. HYDROLOGY AND WATER QUALITY -
Would the project:

a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

ENVIRONMENTAL SETTING

As proposed, the project site consists of a 0.55-acre undeveloped parcel that does not contain any developed storm drainage features or natural channels. A 36-inch stormwater trunk line is located along the site’s northern boundary. No natural water features are located on the project site. The main area of the project site consists of non-irrigated turf.

Existing utility connections at the southern end of Ella Way include community storm drainage collection and transmission facilities. Additional water and storm drain connections are located near the eastern project boundary within the Sunrise Commons apartment complex. Collected stormwater from the project vicinity flows to a stormwater pipeline in Ella Way, thence to a

stormwater trunk line in Patton Avenue for eventual discharge to Cripple Creek. (Citrus Heights 2012)

The project site is not located within 100-year or 500-year flood plains as identified by the Federal Emergency Management Agency (FEMA). According to FEMA, the project site is located in an area of “minimal flood hazard.” (FEMA 2012) As documented in the Sacramento County Hazard Mitigation Plan Update, inundation of the project site as a result of a dam or levee failure would be unlikely, and of low significance (Sacramento County 2016).

The CHWD obtains water to serve its customers from both surface water and groundwater resources. Treated surface water is provided to the CHWD by the San Juan Water District. CHWD supplements its surface water supply with groundwater for readiness-to-serve purposes and to meet peaking, pressure, shortage, and emergency demands. (CHWD 2016)

The CHWD maintains six operating wells with a projected total yield of approximately 5,000 acre feet per year (AFY) based on approximately seven months operation during the dry season. Well production rates vary from 800 to 2,100 gallons per minute. CHWD cycles its wells weekly to maintain operational readiness-to-serve capabilities and to supplement the surface water supply. Over the last five years, this “maintenance” groundwater production has averaged approximately 957 AFY. Past groundwater usage from 2011- 2015 has ranged from 465 AFY in 2013 to 1,930 AFY in 2014. According to the CHWD Urban Water Master Plan, there have been no issues that affect groundwater supply pumping over the last five years. (CHWD 2016)

The CHWD plans to construct an additional two wells through 2022, including the current project, to provide additional dry-year supplies. The District plans to maintain groundwater supply equivalent of 5,000 AFY from its well system. Although CHWD has no plans to increase groundwater withdrawals beyond the average 957 AFY, production could increase up to the full well capacities in successive dry year scenarios to supplement available surface water supplies consistent with the District’s responsibilities under the Water Forum Agreement and other regional water management plans. (CHWD 2016)

The groundwater basin underlying the CHWD is the North American sub-basin, part of the larger Sacramento Valley groundwater basin. Groundwater-bearing formations in the project area include an upper aquifer system consisting of the Riverbank, Turlock Lake, and Laguna formations, and a lower aquifer system consisting primarily of the Mehrten Formation. The formations are typically composed of lenses of interbedded sand, silt, and clay, interlaced with coarse-grained stream channel deposits. (CHWD 2016) Groundwater in the project area moves from sources of recharge to areas of discharge. Most recharge to the local aquifer system occurs along active stream channels where extensive sand and gravel deposits exist. As a result, the highest groundwater elevations occur near the American and Sacramento rivers.

The eastern portion of the North American Sub-basin extends roughly east of San Juan Avenue to the American River, which is the eastern edge of the basin. Historically, this area has relied primarily on surface water. Groundwater levels within the eastern portion of the sub-basin range from 10 feet below to 110 feet above mean sea level (msl) from west to east. Two long-term hydrographs within this area indicate that groundwater elevations have not varied greatly over time. Groundwater elevations measured in the far eastern area of the CHWD have varied no more than two feet from October 1998 through 2012. (SGA 2014) The California Department of Water Resources does not identify the North American Sub-basin as subject to critical conditions of overdraft. (DWR 2016)

Regional water quality analyses of the aquifers underlying the project area have shown that groundwater found in the upper aquifer system is generally of higher quality than that found in the lower aquifer system. Water from the upper aquifer (specifically the Laguna Formation) generally does not require treatment (unless high arsenic levels are encountered), other than disinfection for public drinking water systems. In contrast, the lower aquifer system (specifically the Mehrten Formation) generally contains higher concentrations of iron and manganese. The lower aquifer system also has higher concentrations of total dissolved solids (TDS), although this aquifer also typically meets water quality standards as a potable water source. (CHWD 2016)

Site-specific water quality testing was completed in fall 2017 with the drilling of a test well at the project site. According to water quality testing completed at that time, concentrations of the groundwater constituents analyzed met current drinking water standards at the well depth to be used for the proposed project. (LSCE 2017)

The larger groundwater basin in the vicinity of the CHWD contains three significant major groundwater contamination areas. The United Pacific Railroad plume located northwest of the CHWD in Roseville and the McClellan Air Force Base plume located west of the District. Both plumes are down gradient of the CHWD and are not expected to impact the District's groundwater quality. A third groundwater contamination plume attributed to Aerojet's historic operations was first detected in groundwater south of the American River in 1979. Since that time, Aerojet has installed groundwater treatment facilities and has conducted other efforts to treat and control the plume migration. However, the plume was detected north of the American River near Fair Oaks in 2000 and another plume was detected north of the American River in 2005 near Ancil Hoffman Park in Carmichael. Additional monitoring wells and pump-and-treat facilities have been installed to monitor and treat the plumes attributed to Aerojet. (CHWD 2016)

REGULATORY FRAMEWORK

Construction

Construction Stormwater Control: The City of Citrus Heights is a signatory to the Sacramento County-wide NPDES permit for the control of pollutants in urban stormwater. Since 1990, the City of Citrus Heights, along with the County of Sacramento and the Cities of Sacramento, Elk Grove, Folsom, Galt, Rancho Cordova, and Roseville, has been a partner in the Sacramento Stormwater Quality Partnership (SSQP). These agencies are implementing a comprehensive program involving public outreach, construction and industrial control best management practices, water quality monitoring, and other activities designed to protect area creeks and rivers. If approved, the proposed project would be required to implement all appropriate program requirements, as specified in the Stormwater Quality Manual for the Sacramento Region (SSQP 2014).

Well Permitting and Construction: The Sacramento County Environmental Management department is responsible for oversight of the construction, modification, repair, inactivation and destruction of wells in Sacramento County, through the Department's Wells Program pursuant to Chapter 6.28 of the Sacramento County Code and Section 13801 of the California Water Code. The Wells Program regulates Water Supply Wells, Monitoring Wells, Exploratory Soil Borings, Geothermal Heat Exchange Wells, Cathodic Protection Wells, and other special use wells. Any well constructed in Sacramento County must have a permit from the Environmental Management Department prior to the start of construction unless it is specifically exempted in the Code.

Operation

Water Forum: The CHWD is a member of the Water Forum Agreement (WFA), a regional agreement between government agencies, water purveyors, the business community, and environmental groups with the co-equal objectives of providing a reliable water supply for planned development to the year 2030; and to preserve the lower American River. The WFA provides the following seven major elements that guide water resources management.

1. Increased surface water diversions.
2. Actions to meet customers needs while reducing diversion impacts in drier years.
3. An improved pattern of fishery flow releases from Folsom Reservoir.
4. Lower American River Habitat Management Element, which also addresses recreation on the lower American River.
5. Water conservation.
6. Groundwater management.
7. Water Forum Successor Effort (WFSE).

The CHWD is a signatory to the WFA and participates in the WFSE and conjunctive use planning efforts through the Regional Water Authority (RWA) and the Sacramento Groundwater Authority (SGA) in efforts to implement the seven major elements of the WFA. The District's agreement with WFA contains requirements for implementing water conservation programs. The District continues to implement the required programs and files annual progress reports to the Water Forum.

Regional Water Authority - American River Basin Integrated Regional Water Management Plan (IRWMP): The District is a member and an active participant in the Regional Water Authority. The RWA consists of most of the region's water agencies and focuses efforts on regional supply planning and representation efforts regarding statewide water issues. The proposed Ella Way Well project would be consistent with the 2013 IRWMP's goal of increased groundwater production capacity as outlined in its *Strategy WR2*.

Sacramento Groundwater Authority: The District is a member and an active participant in the Sacramento Groundwater Authority. The SGA focuses primarily on the area's groundwater basin and helps support proactive management and monitoring of the basin to maintain sustainability. SGA's core management responsibilities include:

- To maintain the long-term sustainable yield of the North American Sub-basin, which was estimated to be 131,000 acre-feet in the WFA.
- To manage the use of groundwater in the North American sub-basin and facilitate implementation of an appropriate conjunctive use program by water purveyors.
- To devise and implement strategies to safeguard groundwater quality.

State Water Resources Control Board: The State Water Resources Control Board (State Board) has issued a General Order (Water Quality Order 2012-0010) to regulate Aquifer Storage and Recovery (ASR) projects that involve injection of treated drinking water into an aquifer via an injection well. All injection and extraction wells (or joint wells) are required by the General Order to be constructed in accordance with the California Well Standards by a licensed well driller under the supervision of a California licensed engineer or geologist. The well construction details and lithologic log are required to be known and the well construction (well screen, filter pack, annular seal) designed to limit the

injection to specific aquifer target zones at the injection wells. Water injected into an aquifer must be drinking water that has been treated to comply with the requirements of a State Board Drinking Water Program (DWP) domestic water supply permit. Projects would not be eligible for coverage under the General Order if the discharge would violate State Water Board Resolution 68-16 (the Antidegradation Policy) or would negatively impact a groundwater cleanup project.

As required by the General Order, any activity that results in the degradation of the quality of waters of the state must employ best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur, and the highest quality of water will be maintained consistent with maximum benefit to the people of the state.

The proposed General Order establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water. The General Order requires that ASR projects not:

- Cause groundwater to exceed any water quality objective;
- Unreasonably affect beneficial uses; or
- Cause a condition of pollution or nuisance.

The General Order requires implementation of best practicable treatment or control (BPTC). BPTC measures may include, but are not limited to:

- Injection of potable water produced in compliance with a DWP domestic water supply permit.
- Adequate characterization of source water quality. If source water quality is variable through the year, the project will be operated to optimize use of better quality water during injection cycles.
- Design and operation of an ASR project to minimize adverse aquifer conditions and geochemistry.
- Additional treatment when necessary to fully protect all beneficial uses.
- Reduction of dissolved oxygen in water prior to injection (if oxygen reduction treatment will not create additional water quality issues).
- Groundwater monitoring of the injection/extraction wells and groundwater monitoring wells to evaluate the potential for groundwater quality changes.
- Design of groundwater monitoring networks to address the frequent changes in groundwater flow direction that can be caused by operation of an ASR project.
- Regular evaluation of changing Maximum Contaminant Level (MCLs), Water Quality Objectives, and emerging constituents of concern and their impact on the ASR project.
- An Operation & Maintenance (O&M) Plan.
- Trained ASR project personnel.

The General Order requires that each applicant demonstrate that the water to be injected will be treated to meet drinking water standards by submitting a copy of the DWP domestic water supply permit for the injectate source water. The details of BPTC strategies will be based on project-specific conditions (e.g., supply water characteristics, aquifer water quality, soils and geology, etc.). Applications for coverage under the General Order are required to include an analysis of the

potential for groundwater quality to be impacted as a result of the ASR project. If a pilot test will be performed, the available information may be limited until the pilot test is completed. In such cases, the General Order will allow a limited duration pilot test to acquire the information needed and the potential for degradation will be initially estimated by calculation and/or numeric modeling based on the available data.

ENVIRONMENTAL ANALYSIS

Questions IXa and IXf: Less-than-significant Impact. Potential impacts to groundwater and surface water quality could occur both during the construction phase of well development and during operation.

Temporary increases in the erosion of exposed soils during construction of the facility could result in minor on-or-off-site water quality impacts, particularly if rainfall events occur during an active construction phase. Additionally, chemicals used in construction (fuels, lubricants, paints, coatings) could be released to the environment if spilled. However, CHWD has identified a number of requirements and stormwater management practices that would be instituted during the construction phase, as identified in the Project Description set forth in Section 2 of this Initial Study. The CHWD would implement the following standards and requirements.

In coordination with the City of Citrus Heights, all construction activities would implement stormwater pollution prevention Best Management Practices (BMP) designed to reduce potential impacts to water quality during construction of the project and in accordance with the guidelines of the Sacramento Stormwater Management Program as follows:

- Complying with the requirements of the State Water Resources Control Board’s “General Permit for Stormwater Discharges Associated with Construction Activity”²,
- Protecting adjacent properties and storm drainage facilities from the discharge of sediment or other contaminants from the construction site,
- Preserving all existing vegetation onsite where possible,
- Scheduling as much project work as possible during the dry season,
- Stabilizing the construction access route,
- Protecting storm drain inlets,
- Using other Best Management Practices as necessary, including applying rainy season erosion controls, managing stockpiles, disposing of well development water properly, and correctly managing and disposing of construction wastes,
- Maintaining all Best Management Practices, and
- Stabilizing the site after construction is complete.

During construction and operation of the proposed Ella Way Well, there would be occasions when untreated (non-chlorinated) water would be discharged to an adjacent storm drain: 1) during construction, with the discharge of water used in the well construction process and during development of the water well; and 2) pump to waste discharge on an intermittent basis to maintain

² Because the project site totals 0.55 acres, the CHWD would be exempt from Submitting a Notice of Intent to the State Water Resources Control Board to comply with the General Permit for Stormwater Discharges Associated with Construction Activity due to the small size of the project. Nonetheless, the CHWD has voluntarily agreed to comply with the substantive requirements of the General Permit.

the well. During development, pump testing of the well, and during routine pump maintenance, all discharge water would be disposed of in such a manner as to cause the least impact to the site and vicinity as discussed below.

Clean water produced during well development and testing would be discharged to a municipal storm drain located in Ella Way. Development water containing solids, including sand and silts, would be contained in settling tank(s) or by other means onsite before being discharged into the storm drain. Only “clear water” would be discharged into the storm drain system in compliance with National Pollutant Discharge Elimination System (NPDES) MS-4 discharge requirements. All other waters would be contained and disposed of offsite at an appropriate facility in compliance with State law.

With respect to construction period water quality, due to the gentle site topography, the planned drainage system, the implementation of BMPs and construction requirements as set forth above, NPDES permit requirements, and County and State well construction requirements, this would be a less than significant impact. No additional mitigation would be necessary beyond required well construction standards, identified BMPs, and NPDES requirements.

During operation, implementation of the project could adversely affect groundwater or surface water. Effects to groundwater could occur if the well represented a preferred pathway for pollutant migration to groundwater. Wells that do not meet current well standards of construction may act as conduits for pollutant migration to the subsurface. However, construction and operation of the proposed well would be consistent with legally adopted standards and programs to protect the quality of groundwater in the subterranean aquifers underlying the site, as well as surface waters that may be impacted by the well facility discharges. The Ella Way Well project would consist of groundwater extracted at the project site and the use of a calcium hypochlorite disinfection system to treat the raw groundwater. After disinfection, treated water would be pumped into the 8-inch water main located on the on Ella Way.

ASR projects may impact groundwater quality by causing degradation with disinfection by-products, salinity, metals, pesticides, pharmaceuticals and personal care products. With the exception of disinfection by-products and certain metals that may become dissolved in the aquifer through geochemical reactions, these constituents of concern, if present, would be the result of storm water runoff and wastewater discharged into the water source upstream of the water supply intake system.

As mitigation for potential groundwater quality degradation that does not exceed water quality objectives, applicants seeking coverage under the proposed General Order are required to demonstrate that:

- Injected water complies with State Board Drinking Water Program drinking water standards;
- Certain minimum treatment or control measures will be implemented; and
- The project will not cause exceedance of any applicable water quality objectives.

In summary, construction and operation of the Ella Way Well as a source of drinking water would not violate any water quality standards or discharge requirements. Because the CHWD has not decided whether to also operate the Ella Way Well as an ASR facility, it has not completed any studies of the constituents of the source of water to be injected, determined what PBTC measures are necessary to ensure that groundwater quality is not adversely affected, or defined the timing and

quantity of injection. For these reasons, the potential impact of the Ella Way Well ASR component is potentially significant. Implementation of the following measures would ensure that implementation of the ASR component would not adversely affect groundwater quality.

Mitigation Measure 5

Prior to the operation of an ASR component to the Ella Way Well, the CHWD will:

Submit a Notice of Intent for coverage under Water Quality Order 2012-0010 to the Central Valley Regional Water Control Board together with all information required under Section D of the Order, and obtain a Notice of Acceptance.

Mitigation Measure 6

Operation of the Ella Way Well ASR component shall meet the following standards:

1. Injected water shall be of a quality that will not result in exceedance of a water quality objective in compliance with the requirements of the Antidegradation Policy.
2. The Ella Way Well ASR project shall not negatively impact a groundwater cleanup project.
3. Injected water shall be treated and delivered to the injection well consistent with the requirements of all applicable San Juan Water District and CHWD domestic water supply permits.
4. At a minimum, the following treatment and control measures shall be required:
 - a. Treatment (typically flocculation, filtration, and disinfection to remove suspended solids and pathogenic microorganisms) so that all injected water is potable.
 - b. Adequate characterization of source water quality. If source water quality is variable through the year, operate the ASR project to optimize use of better quality water during injection cycles.
 - c. Design and operation of the Ella Way Well ASR component to minimize adverse aquifer conditions and geochemistry.
 - d. Additional treatment when necessary to fully protect all beneficial uses.
 - e. Perform groundwater monitoring of the injection/extraction well and any groundwater monitoring wells to evaluate the potential for groundwater quality changes.
 - f. Implementation of an Operation & Maintenance (O&M) Plan.
5. The CHWD shall identify and implement any additional treatment and control measures necessary to comply with the requirements of the Antidegradation Policy.

Implementation of the foregoing measures would ensure that implementation of the Ella Way Well ASR component would not adversely affect groundwater quality or beneficial uses of groundwater, including as a source of drinking water. As mitigated, this impact would be less than significant, and no additional mitigation would be necessary.

Question IXb: Less-than-significant Impact. The majority of water used in the District comes from surface water through a contract with the San Juan Water District. The CHWD Urban Water Master Plan (2016) states that during drought years, water demand will need to be met through a conjunctive approach utilizing both surface and groundwater supplies. The Ella Way Well would extract untreated groundwater, which would then be disinfected onsite and pumped into the

District's existing distribution system to augment existing surface water allotments and to provide for water emergency and fire flow purposes.

The proposed Ella Way Well project would be consistent with and implement the CHWD's responsibilities and obligations under the Sacramento Water Forum Agreement as a San Juan Water District consortium member (April 2000), the Regional Water Authority's (RWA) Integrated Regional Water Management Plan (July 2013), and the Sacramento Groundwater Authority's Groundwater Management Plan (December 2014). The facilities constructed under the proposed project would directly serve to operate and maintain the groundwater basin for use in drought years through conjunctive use and water efficiency/conservation programs as provided by the regional water plans cited above.

The Ella Way Well project site is located on the east side of the Sacramento River Valley, north of the American River within the North American sub-basin, part of the larger Sacramento Valley groundwater basin. Groundwater-bearing formations in the project area include an upper aquifer system consisting of the Riverbank, Turlock Lake, and Laguna formations, and a lower aquifer system consisting primarily of the Mehrten Formation.

The eastern portion of the North American Sub-basin (within which the CHWD is located) extends roughly east of San Juan Avenue to the American River, which is the eastern edge of the basin. Historically, this area has relied primarily on surface water. Groundwater levels within the eastern portion of the sub-basin range from 10 feet below to 110 feet above msl from west to east. Two long-term hydrographs within this area indicate that groundwater elevations have not varied greatly over time. Groundwater elevations measured in the far eastern area of the CHWD have varied no more than two feet from October 1998 through 2012.

CHWD maintains six operating wells with a projected total yield of approximately 5,000 acre feet per year (AFY) based on approximately seven months operation during the dry season. Past groundwater usage from 2011- 2015 has ranged from 465 AFY in 2013 to 1,930 AFY in 2014. Even with construction of the proposed Ella Way well, the District plans to maintain groundwater supply equivalent of 5,000 AFY from its well system. Although CHWD has no plans to increase groundwater withdrawals beyond the average 957 AFY, production could increase up to the full well capacities in successive dry year scenarios to supplement available surface water supplies, consistent with the dry-year conjunctive use standards of the SGA, RGA, and Water Forum Agreement.

Groundwater extraction from the eastern portion of the North American sub-basin under a conjunctive use program as proposed by the CHWD is not expected to adversely affect the local groundwater supplies. Because of the small area of new impervious surface and the location of the project site distant from important areas of aquifer recharge, development of the Ella Way Well site would not adversely affect groundwater recharge to the production aquifers. The Ella Way Well project would facilitate implementation of the approved CHWD Urban Water Master Plan (2016) and the regional groundwater management plans cited above. Implementation of the proposed well project would not result in an increase in water demand beyond that anticipated by the Citrus Heights General Plan, nor would it provide a significant increase in available water supplies to serve unplanned growth. There would be a less-than-significant impact, and no mitigation would be necessary.

Questions IXc through IXe: Less-than-significant Impact. The project site consists of a 0.55-acre undeveloped parcel that does not contain any developed storm drainage features or natural channels. No natural water features are located on the project site. No proposed aspect of constructing or operating the Ella Way Well project would interfere with an existing channel, result in erosion of the existing banks, or result in the discharge of sediment laden water into the creek.

Existing utility connections at the southern end of Ella Way include community storm drainage collection and transmission facilities. Additional storm drainage connections are located near the eastern project boundary within the Sunrise Commons apartment complex. Collected stormwater from the project vicinity flows to stormwater collection facilities in Ella Way, thence to a trunk line in Patton Avenue, for eventual discharge to Cripple Creek.

The Ella Way Well project would create small areas of additional impervious surfaces on the well site. Implementation of the proposed project would act to replace the existing overland flow drainage pattern with surface and subsurface stormwater collection and routing. Stormwater generated on-site would be directed to existing municipal storm drain facilities. The project site drainage facilities and existing off-site municipal stormwater drainage system are designed with capacity to accommodate the increase in runoff volumes and peak flows from the project. No uncontrolled runoff would discharge from the site that could result in erosion and siltation along adjacent surface drainageways.

Added impervious surfaces on the Ella Way Well site would be small in area (~24,000 square feet maximum), but could increase the volume and peak flow of runoff generated on-site. The small acreage and the location of the proposed project site would reduce the potential for a substantial influence on flood volumes or routing. In addition, the project site drainage facilities and the existing off-site stormwater drainage system are designed to address existing and anticipated drainage and flooding. Thus, no adverse effects from increased runoff would occur to drainage facilities or capacity, no significant impact would result and no mitigation would be necessary.

Questions IXg through IXi: No Impact. The project site would not include any residential housing. Therefore, no impact from the placement of housing within a 100-year floodplain would occur.

The project site would not be located within the FEMA designated 100-year or 500-year floodplains. Because the project site would not be sited within a floodway, implementation of the proposed well project would not act to impede or redirect flood flows. The exposure of the project site and facilities to inundation as a result of a dam or levee failure would be unlikely, and of low significance. Thus, no adverse effects from flooding would occur, no impacts would result, and no mitigation would be necessary.

Question IXj: No Impact. Because the project area is located distant from the sea or any large reservoir, the project would not be located in an area subject to inundation hazards from seiche, tsunami, or mudflow. No impacts from such phenomena would occur, and no mitigation would be necessary.

X. LAND USE AND PLANNING – Would the project:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

The City of Citrus Heights General Plan Land Use Designation for the location of the proposed project is Very Low Density Residential. The Zoning Designation is Very Low Density Residential (RD-2) (Citrus Heights 2018). The City of Citrus Heights does not contain any parcels that are protected by Williamson Act contracts (Citrus Heights 2018a).

ENVIRONMENTAL ANALYSIS

Question Xa: No Impact. The proposed Ella Way Well project would be located in the City of Citrus Heights in an existing neighborhood characterized by very low- to low-density residential development. Multi-family apartments are located east of the project site. Existing and planned surrounding land uses would continue to be residential in nature. The proposed project site would be an approximately 0.55 acre parcel that is currently undeveloped (see Figure 2). The property is bounded on all sides by existing low- to high-density residential development.

Additionally, the proposed project would be of a scale and appearance consistent with its residential environs, and would not divide an established community. No impact would occur, and no mitigation would be necessary.

Question Xb: Less-than-significant Impact. The approximately 0.55-acre project site would be formed as a result of a Lot Line Adjustment approved by the City of Citrus Heights Engineering Division. The LLA would lessen the privately owned Parcel “A” as shown on Figures 3a/3b, and thereby increase Parcel “B” to 0.55 acres. The General Plan Very-Low Residential land use designation and the Zoning Code Very-Low Residential (RD-2) designation would remain unchanged for the adjusted parcels.

The RD-2 zoning designation is applied to areas appropriate for detached single dwellings, public and quasi-public uses, and similar and compatible uses. The RD-2 zoning designation is consistent with and implements the Very Low Density Residential land use designation of the General Plan (City of Citrus Heights 2011b). A Utility Facility is an allowed use within this Land Use designation of the General Plan. Utility facilities are also an allowed use in the Zoning Code (City of Citrus Heights 2018b).

Because proposed project activities would be consistent with the project site’s General Plan land use and Zoning Code designations, a less-than-significant impact would occur and no mitigation would be required.

Question Xc: Less-than-significant Impact. As noted above in Section IV, *Biological Resources*, there are no approved or adopted Natural Community Conservation Plans or Habitat Conservation Plans (NCCP/HCP) for the project site or its vicinity. Therefore, the project would not conflict with any such plans. No impact would result, and no mitigation would be necessary.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XI. MINERAL RESOURCES – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

The Ella Way Well project area is not located in a zone of known mineral or aggregate resources. The California Surface Mining and Reclamation Act Mineral Land Classification for the area is Mineral Resource Zone-1, which is defined as “Areas containing mineral deposits the significance of which cannot be evaluated from available data... the likelihood for occurrence of significant mineral deposits is nil or slight.” (Citrus Heights 2011c)

ENVIRONMENTAL ANALYSIS

Questions XIa and XIb: No Impact. No active mining operations are present in, or near, the project area. Implementation of the proposed project would not interfere with the extraction of any known mineral resource. Thus, no significant impacts would result, and no mitigation would be necessary.

XII. NOISE – Would the project result in:

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

The Ella Way Well project would be located in an area that currently experiences urban noise sources. One major roadway, Sunrise Boulevard, is located approximately 0.15 mile from the project site. Traffic noise from this roadway during peak hours may be noticeable in the project area, averaging over 60 dB Ldn under both existing and forecast 2035 conditions (Citrus Heights 2011b). Other than traffic noise, the predominant noise sources at the proposed project site are characterized as low-intensity residential uses, consisting of noise from activities at surrounding residences.

Noise impacts from a project can be categorized as those resulting from either construction or operational activities. Construction noise would have a short-term effect (intermittently for three to seven weeks during the well construction phase and for approximately six months during the pump station construction phase), while operational noise would continue periodically throughout the project life. Implementation of the proposed project would temporarily increase noise levels during construction and intermittently during operations. Since there are residences adjacent to the proposed well site that may be affected, the following discussion considers these noise sources in more depth.

Environmental noise usually is measured in A-weighted decibels (dBA). An A-weighted decibel is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.

Environmental noise typically fluctuates over time, and different types of noise descriptors are used to account for this variability. Typical noise descriptors include the energy-equivalent noise level

(Leq) and the day-night average noise level (Ldn).³ The Ldn is commonly used in establishing noise exposure guidelines for specific land uses. In areas where noise is dominated by traffic, the Leq during the peak-hour is generally equivalent to the Ldn at that location.

Generally, a three-dBA increase in ambient noise levels represents the threshold at which most people can detect a change in the noise environment; an increase of 10 dBA is perceived as a doubling of loudness. In areas where existing noise levels are dominated by traffic, a doubling in the volume of vehicular traffic would cause ambient noise levels to increase by three dBA.

The noise level experienced at a receptor depends on the distance between the source and the receptor, presence or absence of noise barriers and other shielding devices, and the amount of noise attenuation (lessening) provided by the intervening terrain. For line sources, such as motor or vehicular traffic, noise decreases by about 3.0 to 4.5 dBA for every doubling of the distance from the roadway. For point or stationary noise sources, such as electric motors, a noise reduction of 6.0 to 9.0 dBA is experienced for each doubling of the distance from the source.

Construction noise would have a short-term effect; operational noise, primarily from the production well motor, would continue intermittently when the well is operating throughout the lifetime of the project. A project would have a significant adverse impact on the environment if it substantially increased the ambient noise levels for adjoining areas, unless the area under consideration were already noise-impacted. For the purposes of this Initial Study, a 5 dBA increase in Ldn or Leq, or more, or a change from one noise compatibility standard category to the next higher category in the Noise Element (e.g., from “normally acceptable” to “conditionally acceptable”) would be considered to be a significant impact.

CONSTRUCTION NOISE

Questions XIIa, XIIb, and XIIc: Less-than-significant Impact. Construction of the proposed Ella Way Well would temporarily increase noise levels in the vicinity of construction activities intermittently over the construction periods that encompass both the well and pump station construction phases of the project. Currently, there are noise sensitive land uses (low- and high-density residences) located in the immediate vicinity, which could be subjected to noise from construction activities associated with the proposed project.

Construction activities would be considered an intermittent noise impact throughout the construction of the project, and would vary in their effects on sensitive receptors depending on the presence of intervening barriers or other insulating materials. All work would be performed between the hours of 7 a.m. and 8 p.m. Monday through Friday. The only exception to the designated work hours would be made for the purpose of drilling the well. For this operation, continuous work (up to 24 hours per day) would be necessary in order to protect the integrity of the well structure. It is expected that this phase of work would take three to six days to complete. Temporary 20 foot high sound walls and appropriate muffler devices would be used to mitigate the noise impacts of the drilling operation on the surrounding residential area. In addition, the use of impact wrenches would be prohibited between the hours of 8 p.m. and 7 a.m.

³ Leq, the energy equivalent noise level (or "average" noise level), is the equivalent steady-state continuous noise level which, in a stated period of time, contains the same acoustic energy as the time-varying sound level actually measured during the same period. Ldn, the day-night average noise level, is a weighted 24-hour average noise level. With the Ldn descriptor, noise levels between 10:00 p.m. and 7:00 a.m. are adjusted upward by ten dBA to take into account the greater annoyance of nighttime noise as compared to daytime noise.

Although construction activities would for the most part occur only during daytime hours, uncontrolled construction noise could still be considered disruptive to local residents adjacent to the proposed project. Typical composite noise levels for construction activities, and distances of various noise contours from construction site, are presented in Table 4.

		Approximate Distance (ft.) to Reduce Noise to Given Level (dBA, Leq) /b/		
Construction Activity	Noise Level at 50 feet (dBA, Leq) /a/	60	65	70
Ground Clearing	84	790	450	250
Excavation	89	1,400	800	450
Well drilling (driver)	80	430	235	150
Foundations	78	400	220	130
Erection	85	890	500	280
Finishing (exterior)	89	1,400	800	450

/a/ U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 1971; U.S. Department of Transportation, Federal Highway Administration, Office of Planning, Environment, and Realty, Roadway Construction Noise Model (RCNM), June 28, 2017.

/b/ Calculations assume a 6 dBA reduction for each doubling of distance from the noise source.

In order to regulate such noise, the City of Citrus Heights has established standards for noise levels from activities, including construction. Construction noise levels may be higher than Section 34-86 of the City of Citrus Heights Municipal Code would allow at a point at least one foot inside the property line of an affected residential property (50-55 dBA). However, Section 34-88(5) of the City of Citrus Heights Municipal Code provides the following exemption from Section 34-86 (50-55 dBA) for construction activities, such as those necessary to implement all phases of work for the proposed Ella Way Well project:

Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided the activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday, Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday, and on each Sunday after the hour of 8:00 p.m. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

All work necessary to implement the project would be performed between the hours of 7 a.m. and 8 p.m. Monday through Friday, consistent with City of Citrus Heights noise standards. However, an exception to the designated work hours would be made for the purpose of drilling and constructing the well. For these operations, continuous work (up to 24 hours per day) would be necessary in order to protect the integrity of the well structure. It is expected that this phase of work would take three to six days to complete.

Although no final plans regarding the precise location of the well have been developed by CHWD, the preliminary layout of the project site suggests that the well would be located approximately 60 feet from the property line of the nearest residence (to the north), and 130 feet from the nearest façade of this home. At this distance between the well and the nearest residence, noise levels during drilling would range from 70-75 dB leq. Because well drilling and construction would occur outside of the times permitted by the City of Citrus Heights, and noise levels temporarily would exceed those established by Section 34-86 of the City of Citrus Heights Municipal Code, this would be a significant impact and mitigation would be required.

Mitigation Measure 7

To reduce the effects of construction noise on affected residents, the CHWD shall implement the following measures:

- Except for drilling and constructing the well, all work necessary to implement the project would be performed between the hours of 7 a.m. and 8 p.m. Monday through Friday
- Temporary sound walls (minimum 16 feet high) will be installed around the work area to reduce noise impacts during drilling and construction operations.
- All equipment will be equipped with appropriate muffler devices to reduce the noise impacts of the drilling operations.
- The use of impact wrenches would be prohibited between the hours of 8 p.m. and 7 a.m.
- The CHWD may provide alternate nighttime accommodations if needed to mitigate noise impacts during drilling.

Based on industry standards, installation of temporary sound walls would be expected to reduce sound levels by 15 dB, thereby reducing sound levels at the nearest residence to 60 dB leq. Closed windows and walls of the residence would provide at least 25 dB of additional noise reduction. It is reasonable to assume that nearby residents would close windows during drilling operations. Thus, with windows closed, sound levels within the home would approximate 35 dB leq.

To add a margin of error to reflect varying sensitivities to noise, this analysis assumes that noise levels within the nearest residence would be less than 45 dB leq at night. Section 34-87 of the City of Citrus Heights Municipal Code regulates interior noise levels during nighttime hours and establishes an interior noise level of 45 dBA as an acceptable noise level for nighttime noise. Nighttime is defined in this section of the Municipal Code as lasting from 10:00 p.m. to 7:00 a.m. Though technically this section of the Municipal Code pertains to noise generated in a neighboring residential unit, it does establish the City of Citrus Heights' standard for appropriate levels of nighttime noise within a residence.

As set forth above, with implementation of Mitigation Measure 7, well drilling and construction operations would meet this standard. Because all work necessary to implement the project would be performed between the hours of 7 a.m. and 8 p.m. Monday through Friday, noise attenuation measures such as temporary walls and mufflers on equipment would be required, and alternate nighttime accommodations would be available, the project as proposed would conform to the requirements of the City of Citrus Heights' Noise Ordinance. Therefore, no significant impact would occur and no mitigation would be required.

OPERATIONAL NOISE

Question XIIc: Less-than-significant Impact with Mitigation. Implementation of the project would only nominally increase the number of vehicle trips to and from the project area. A doubling of traffic volumes would be necessary to increase ambient noise levels by three dBA. However, since traffic generated by the project would be limited to infrequent visits to the pump site by CHWD maintenance and operations staff, traffic increases for project operations would not occur at levels that would noticeably affect the ambient noise environment.

On-site facilities and processes that could result in operational noise include the electric well motor, air conditioning to maintain optimal operational temperatures within the pump building, and a backup diesel generator when on site. Operation of the vertical turbine pump motor would generate a constant noise level of 70 dBA measured at five feet. The well, pump and associated facilities would be enclosed in a masonry block building to attenuate the operational noises. The installation of a submersible pump and motor generates less noise than an above-grade and enclosed vertical turbine pump motor. No adverse levels of vibration would be generated during project operations.

The nearest single-family residence would be located approximately 125 feet north of the proposed well and pump station. The nearest apartment is located nearly 175 feet to the east of the pump station building.

For simple tone noise such as that produced by the well pump motor, performance standards are generally reduced by five dBA to account for the greater annoyance of simple tones versus more complex noises such as traffic. Citrus Heights Municipal Code Section 34-91(a) requires that all stationary mechanical equipment, such as the well pump and air conditioning unit, not exceed 60 dBA at any point at least one foot inside the property line of the nearest affected residential property at three to five feet above ground level. Since the simple tone pump noise is relatively constant, the applicable performance noise standard would be approximately 55 dBA at any point at least one foot inside the property line of the affected residential property, 36 inches above the ground based on the above standard for single family residential uses. However, Municipal Code Section 34-86 establishes a standard of 50 dBA for noises emitted from 10:00 p.m. to 7:00 a.m. at a distance of 1 foot within the property line for residential uses. Since the pump and air conditioning may operate at any time during the day or night, this 50-dBA standard will be used in this analysis.

Given the distance from sensitive receivers to the pump station and well and the nature of the noise source, this would be a potentially significant impact. Implementation of the following measure would ensure that adverse noise levels would be reduced to below a level of significance. No residual impacts would remain, and no additional mitigation would be necessary.

Mitigation Measure 8

The noise levels of pump station motors and other facilities at the Ella Way Well shall not exceed 50 dBA at the property lines. (This would ensure that Citrus Heights Municipal Noise Ordinance standards were met for adjacent existing residential uses.) At the time of well and equipment installation, adequate noise attenuation measures shall be provided to reduce noise levels to the 50-dBA standard. Motors and other noise producing equipment shall be shielded or enclosed to meet this standard. Compliance with this standard shall be demonstrated with pre- and post-construction noise measurements taken during test operations of project facilities. The implementation of noise attenuation measures shall be to the satisfaction of the CHWD.

Questions XIIe and XIIIf: No Impact. Since the proposed project site would be located more than 2 miles from the nearest public or private airport, and noise levels from airport operations do not exceed County General Plan standards at the project site, workers at the proposed Ella Way Well site would not be exposed to adverse levels of aircraft noise. No impact would result and no mitigation would be necessary.

XIII. POPULATION AND HOUSING – Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?
- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
		X	
			X
			X

Question XIIIa: Less-than-significant Impact. Because the objective of constructing and operating the well facility is to provide the CHWD with additional water resources to supplement surface water entitlements in the event of a drought or water emergency, and to provide additional resources for fire flow requirements, implementation of the well project would assist in the provision of planned housing and other urban uses. This would be a less than significant impact and no mitigation would be necessary.

The proposed project would not provide any housing units. Implementation of the project would create short-term employment opportunities. While construction employment would be created during the project construction phase, the necessary employees could be expected to be provided by the local labor pool, without the importation of significant amounts of new labor given that there were 27,400 unemployed workers within Sacramento County in December 2017 (EDD 2018). Given the small number of new employees required for the project construction phase, all new employees could be accommodated by the local labor pool.

The proposed project would provide an additional source of potable water for the Citrus Heights Water District’s service area. The water provided by the proposed project would be used to augment or supplant existing water entitlements in the event of a drought or water emergency, to operate and maintain the groundwater basin under a regional conjunctive use program and for those other purposes as noted in the introductory Project Description of this Initial Study. However, since the project is for intermittent use only, and no increased water supply during normal conditions would result, no direct or indirect population growth beyond that currently anticipated by the City of Citrus Heights is expected to result from project completion. Thus, no significant impacts to population or housing would occur with the implementation of the Ella Way Well project, and no mitigation would be required.

Questions XIIIb and XIIIc: No Impact. The proposed project would be situated on a parcel approximately 0.55 acres in size. There are no housing units or any other developed uses on the project site. Because the site is undeveloped and has no existing housing units, there would be no displacement of housing units or substantial numbers of people; replacement housing would not be required. There would be no impact, and no mitigation would be required.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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XIV. PUBLIC SERVICES

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives of any of the public services:

Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

Public services provided to the project site and vicinity include police, fire, school, library, and park services.

The closest fire station is Sacramento Metropolitan Fire District Station 27, approximately one mile west of the project site. The Citrus Heights Police Department, located at 6315 Fountain Square Drive in Citrus Heights, supports 4 lieutenants, 10 sergeants, and 52 officers. The San Juan Unified School District includes some elementary schools, 8 K-8 schools, 8 middle schools, and 9 high schools, plus an additional number of alternative schools, early childhood centers, and adult education centers. The Sunrise Recreation and Park District has 25 park facilities in the Citrus Heights area; Madera Park is less than one-half mile to the east of the project site. The City of Citrus Heights partners with the Sacramento Public Library to enhance service levels at the Sylvan Oaks Library, located at 6700 Auburn Boulevard. (Citrus Heights 2018b)

ENVIRONMENTAL ANALYSIS

Question XIVA: No Impact. Because the proposed project does not include any housing units, there would be no increase in population or the need for public services that would require the provision of new or physically altered governmental facilities. There would be no impact and no mitigation would be required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

XV. RECREATION:

The Sunrise Recreation and Park District (SRPD) manages 493 acres within an area of 27 square miles and administers programs for families and businesses that include classes, adult sports leagues, senior activities, and youth sports programs. The SRPD maintains 42 parks, 3 community centers, 2 aquatic facilities, and other programs that serve the residents of Antelope, Citrus Heights, and Foothill Farms. The SRPD has 25 park facilities in the Citrus Heights area; Madera Park is less than one-half mile to the east of the project site.

ENVIRONMENTAL ANALYSIS

Questions XVa and XVb: No Impact. The proposed project does not directly involve construction of housing or facilities that could increase the demand for neighborhood or regional parks, or other recreational facilities. Development of the Ella Way Well would not involve the creation of new recreation facilities, or adversely affect existing facilities. Thus, no significant adverse impacts to recreation would occur with implementation of the proposed Ella Way Well project and no mitigation would be required.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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XVI. TRANSPORTATION/TRAFFIC - Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.			X	
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

ENVIRONMENTAL SETTING

Roadways in the project vicinity are programmed by the City of Citrus Heights General Plan, and maintained by the City of Citrus Heights in order to adequately handle traffic generated by urban uses within the City of Citrus Heights, including traffic generated by the Ella Way Well project. There are no other congestion management plans, or adopted policies, plans, or programs supporting alternative transportation in the City of Citrus Heights.

Access to the project site would be from Ella Way via an on-site driveway. Regional access would be provided via Interstate 80, Sunrise Boulevard, Auburn Boulevard, and Old Auburn Road. Other than pedestrian sidewalks on Ella Way and adjacent streets, there are no provisions for other modes of transportation in the project area. No bikeways or transit routes are located or planned in the vicinity of the project. (Citrus Heights 2015, SRT 2018)

During the active construction period, up to twenty construction worker trips and deliveries of construction supplies or equipment could occur on weekdays. The actual number of construction trips on any given day would be irregular, and would depend upon the construction phase and the need for project supply or equipment deliveries.

During project operation, there would be no regular on-site employees, or deliveries provided to the project site. Under normal operations, approximately six trips per month would be generated with implementation of the proposed project, all entering and exiting the site at Ella Way. In a dry year or

during monthly testing, the project would generate one to two daily visits when the well is running, depending on the level of production required by the CHWD.

Access to the site would be via an onsite driveway from Ella Way. Other than installation of the project driveway, no other transportation facilities would be modified or constructed. The CHWD would offer an Irrevocable Offer of Dedication (IOD) to the City of Citrus Heights for a potential future southerly extension of Ella Way along the newly established west boundary of Parcel B. This portion of the project site would remain available to the City of Citrus Heights for future use as a thoroughfare should the City of Citrus Heights request access to benefit future urban development to the south of the project site. Until such time, the area would be owned and maintained by the CHWD.

ENVIRONMENTAL ANALYSIS

Questions XVIa and XVIb: Less-than-significant Impact. As noted above, up to twenty daily construction trips could occur during the construction phase of the project, although the number of trips on a given weekday would be irregular. Depending upon the construction phase, vehicle trips could be substantially less than twenty. Given the existing low traffic volumes on Ella Way, Shareen Way, and Patton Avenue, the addition of construction traffic would not be substantial, and would not decrease the level of service on any of these roadways.

During project operations, there would be no regular on-site employees, or deliveries provided to the project site. Under normal operations, approximately six trips per month would be generated with implementation of the proposed project. When the well is running, that number would increase to one to two daily trips. Implementation of the project would include modifications to the project's frontage on Ella Way, but no other transportation facilities would be modified or constructed. Implementation of the project would not conflict with applicable plans, policies, or programs related to transportation. The proposed project would not have an adverse effect on traffic operations or roadway safety. This would be a less than significant impact, and no mitigation would be required.

Question XVIc: No Impact. The proposed project would not result in any changes in air traffic patterns. The nearest airport, Sacramento McClellan Airport, is located approximately seven miles southwest of the site. The project includes no features such as bright lighting, tall structures, or activities that attract substantial numbers of birds that would adversely affect aircraft operations. No impact would result, and no mitigation would be required.

Question XVIId: Less-than-significant Impact. Access to the site would be provided by a paved driveway from Ella Way. Implementation of the proposed project would not result in any changes to local roadways. There would be no increase to hazards due to a design feature or incompatible uses. A less-than-significant impact would result, and no mitigation would be required.

Question XVIe: Less-than-significant Impact. No designated emergency access routes are located in the vicinity of the project, thus no modification of such facilities would occur. As noted above, implementation of the project would not adversely affect any transportation facility. This would be a less than significant impact, and no mitigation would be necessary.

Question XVIIf: No Impact. No pedestrian, bike or transit facilities or services are located in the vicinity of the project. Thus no conflict with any such facilities would occur. As noted above, implementation of the project would not adversely affect any transportation facility. This would be a less than significant impact, and no mitigation would be necessary.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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XVII. TRIBAL CULTURAL RESOURCES - Would the project:

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

		X	
		X	

ENVIRONMENTAL SETTING

A Tribal Sacred Lands search request was filed with the Native American Heritage Commission (NAHC). The search was completed with the conclusion that no tribal cultural resources are located on or in the vicinity of the proposed project site (NAHC 2018).

Records of the known cultural resources found in Sacramento County are included in the files of the Office of Historic Preservation, California Historical Resources Information System. The Northern California Information Center (NCIC), housed at California State University, Sacramento, locally administers these records. A cultural resources records search was conducted at the NCIC for the project site and surrounding area to determine its historic and cultural sensitivity (NCIC 2018). Based on the records search, there are no known prehistoric or historic archaeological resources on the project site or in its vicinity that have been reported to the NCIC.

REGULATORY SETTING

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to any California Native American tribes that have requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include Tribal Cultural Resources (TCR), the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Section 21074(a) of the Public Resource Code (PRC) defines TCRs for the purpose of CEQA as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope),

sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

- a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
- b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
- c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

“Substantial evidence” is defined in Section 21080 of the Public Resources Code as “fact, a reasonable assumption predicated upon fact, or expert opinion supported by fact.”

The criteria for inclusion in the California Register of Historical Resources (CRHR) are as follows [CCR Title 14, Section 4852(b)]:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; and/or
2. It is associated with the lives of persons important to local, California, or national history; and/or
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; and/or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition, the resource must retain integrity, which is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)].

Summary of Tribal Consultation

Consistent with the requirements of PRC Section 21080.3.1(b), the CHWD has received written requests to be notified of projects in which the CHWD is the Lead Agency under CEQA from the Wilton Rancheria, United Auburn Indian Community, and the Buena Vista Rancheria of Me Wuk Indians. Therefore, on March 22, 2018, the CHWD sent letters offering project consultation to these tribes. The letters provided a brief description of the proposed project and its location, the lead agency contact information, and a notification that each tribe has 30 days from receipt of the CHWD’s letter to request consultation. The 30-day response period concludes on April 24, 2018.

Should one or more of the tribes request consultation on the project, a summary report of the consultation process shall be made an addendum to this Initial Study/Mitigated Negative Declaration for review by the CHWD Board of Directors prior to their consideration of the project.

ENVIRONMENTAL ANALYSIS

Question a, b: Less-than-significant Impact. The search for Tribal Sacred Lands resources conducted by the NAHC yielded negative results. Additionally, a NCIC Records Search for cultural resources found no prehistoric archaeological resources on the project site or in its vicinity that have been reported to the NCIC. In making an offer of consultation to registered tribes pursuant to PRC Section 21080.3.1, the CHWD has met the initial requirements of AB 52. Because the CHWD has initiated consultation with registered tribes, and no known tribal cultural resources or other prehistoric cultural resources were identified that are listed or eligible for listing in a register of historic resources, a less-than-significant impact would result. No mitigation would be required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS -				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing water entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Urban utilities available in the project vicinity include a 36-inch stormwater collection trunk that runs along the north boundary of the project site and within Ella Way, and treated water distribution and wastewater collection piping in Ella Way stubbed to the project site. Commercial solid waste collection services in Citrus Heights are provided by a number of waste haulers, who in turn dispose of solid waste in up to 18 landfills in the surrounding region.

ENVIRONMENTAL ANALYSIS

Questions XVIIIa and XVIIIe: Less-than-significant Impact. The Ella Way Well would include an electric motor-driven pump, a disinfection system, and associated facilities to pump, treat, and transport water into the CHWD potable water distribution system. The proposed project would not generate new wastewater as a result of the disinfection system or pumping process. No new wastewater treatment plant capacity would be necessary to service the project. Implementation of the proposed Ella Way Well would result in a less-than-significant impact, and no mitigation would be necessary.

Question XVIIIc: Less-than-significant Impact. The proposed Ella Way Well would create some impervious surfaces. Stormwater facilities on the site would be connected to an existing municipal 36-inch stormwater transmission main in Ella Way. The existing 36-inch main is of sufficient size to account for any increased runoff. Therefore, expansion or creation of stormwater facilities would not be necessary for the proposed projects, no significant impact would occur, and no mitigation would be necessary. (For additional discussion of stormwater generation and management, see Section IX, *Hydrology and Water Quality*, of this Initial Study.)

Questions XVIIIb and XVIIId: Less-than-significant Impact. The proposed Ella Way Well project would be consistent with and implement the CHWD's responsibilities and obligations under the Sacramento Water Forum Agreement as a San Juan Water District consortium member (April 2000), the Regional Water Authority's (RWA) Integrated Regional Water Management Plan (July 2013), and the Sacramento Groundwater Authority's Groundwater Management Plan (December 2014). The facilities constructed under the proposed project would directly serve to operate and maintain the groundwater basin for use in drought years through conjunctive use and water efficiency / conservation programs as provided by the regional water plans cited above. Implementation of the project would not result in an increase in water demand beyond that anticipated by the City of Citrus Heights General Plan, nor would it provide a significant increase in available water supplies to serve unplanned growth. Therefore, no significant impact would occur, and no mitigation would be necessary. (For additional discussion of water supply, see Section IX of this Initial Study.)

Questions XVIIIf and XVIIIg: Less-than-significant Impact. The proposed project consists of the construction and operation of a production well and associated facilities, which are not anticipated to generate substantial amounts of solid waste beyond that currently generated by CHWD operations. No solid waste collection services would be provided to the project site. Solid waste generated during well operations would be transferred to the District's corporation yard for collection as part of the District's standard waste stream. Therefore, no significant impact would occur, and no mitigation would be necessary.

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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XIX. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)		X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X	

Question XIXa. As discussed above, the project has the potential to adversely impact air quality (construction dust), biological resources (migratory birds, protected trees), undiscovered cultural resources, and noise (operations). With the implementation of mitigation measures identified in this Initial Study (see below), all potential impacts would be reduced to a less-than-significant level. No significant or potentially significant impacts would remain.

Question XIXb. The projects would accommodate CHWD, City of Citrus Heights, regional, and statewide environmental goals to provide for adequate sources of water. While the project would indirectly contribute to cumulative impacts associated with increased urban development in the Citrus Heights Water District service area and the City of Citrus Heights, these impacts have previously been evaluated by the City of Citrus Heights and considered in the City of Citrus Heights’ approval of the City of Citrus Heights General Plan. The proposed Ella Way Well project would not make a cumulatively considerable contribution to these cumulative effects, this would be a less-than-significant impact, and no mitigation would be required.

Question XIXc. Because of existing regulation and monitoring of many potential environmental impacts, and with the implementation of mitigation measures identified in this report, the project would not have the potential to cause substantial adverse effects on human beings. This would be a less-than-significant impact, and no mitigation would be required.

MITIGATION MEASURES:

Mitigation Measure 1

All projects are subject to SMAQMD rules in effect at the time of construction. Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff. CHWD shall implement, or require its contractors to implement, all of the following measures as identified by SMAQMD:

Basic Construction Emission Control Practices

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Mitigation Measure 2

The CHWD or the construction contractor shall schedule vegetation removal and ground-clearing activities prior to the initiation of nesting activity (March) or after fledging (August). If the CHWD determines that it is infeasible to avoid construction during the nesting season, the CHWD or the construction contractor shall conduct pre-construction surveys between March 1 and August 15 in potential nesting habitat to identify nest sites. If an active raptor nest is observed within 500 feet of the project site, CHWD shall contact CDFW for guidance and/or establish a 500-foot buffer around the nest tree. If a passerine bird nest is observed during surveys, a 100-foot buffer around the nest shall be established or consultation with CDFW shall be conducted for a reduced buffer zone based on nesting phenology, site conditions, and recommendation(s) of a biological monitor. Construction activities in the buffer zone shall be prohibited until the young have fledged.

Mitigation Measure 3

During project design and construction, CHWD shall avoid jurisdictional trees, including their protected zones as defined by Chapter 106.39 of the Citrus Heights Municipal Code. The CHWD or its contractor shall implement the standard policies and procedures set forth in Section 106.39.050 of the Citrus Heights Municipal Code during the design and construction of proposed improvements. In the event that a jurisdictional tree and its protected zone cannot be avoided, CHWD or its contractor shall obtain a Tree Permit from the City of Citrus Heights, and implement all requirements of the permit.

Mitigation Measure 4

Prior to initiation of construction on the project site, CHWD shall require that any construction or improvement plans contain a notation requiring that if any archaeological, cultural, historical resources, artifacts or other features are discovered during the course of construction anywhere on the project site, work shall be suspended in that location until a qualified professional archaeologist

assesses the significance of the discovery and provides consultation with CHWD staff. Appropriate mitigation for curation or protection of the resources, as recommended by the archaeologist, shall be implemented upon approval by CHWD. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

In addition, pursuant to §5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of any human remains, all work is to stop and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

Mitigation Measure 5

Prior to the operation of an ASR component to the Ella Way Well, the CHWD will:

Submit a Notice of Intent for coverage under Water Quality Order 2012-0010 to the Central Valley Regional Water Control Board together with all information required under Section D of the Order, and obtain a Notice of Acceptance.

Mitigation Measure 6

Operation of the Ella Way Well ASR component shall meet the following standards:

1. Injected water shall be of a quality that will not result in exceedance of a water quality objective in compliance with the requirements of the Antidegradation Policy.
2. The Ella Way Well ASR project shall not negatively impact a groundwater cleanup project.
3. Injected water shall be treated and delivered to the injection well consistent with the requirements of all applicable San Juan Water District and CHWD domestic water supply permits.
4. At a minimum, the following treatment and control measures shall be required:
 - g. Treatment (typically flocculation, filtration, and disinfection to remove suspended solids and pathogenic microorganisms) so that all injected water is potable.
 - h. Adequate characterization of source water quality. If source water quality is variable through the year, operate the ASR project to optimize use of better quality water during injection cycles.
 - i. Design and operation of the Ella Way Well ASR component to minimize adverse aquifer conditions and geochemistry.
 - j. Additional treatment when necessary to fully protect all beneficial uses.
 - k. Perform groundwater monitoring of the injection/extraction well and any groundwater monitoring wells to evaluate the potential for groundwater quality changes.
 - l. Implementation of an Operation & Maintenance (O&M) Plan.
5. The CHWD shall identify and implement any additional treatment and control measures necessary to comply with the requirements of the Antidegradation Policy.

Mitigation Measure 7

To reduce the effects of construction noise on affected residents, the CHWD shall implement the following measures:

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- Except for drilling and constructing the well, all work necessary to implement the project would be performed between the hours of 7 a.m. and 8 p.m. Monday through Friday
 - Temporary sound walls (minimum 16 feet high) will be installed around the work area to reduce noise impacts during drilling and construction operations.
 - All equipment will be equipped with appropriate muffler devices to reduce the noise impacts of the drilling operations.
 - The use of impact wrenches would be prohibited between the hours of 8 p.m. and 7 a.m.
 - The CHWD may provide alternate nighttime accommodations if needed to mitigate noise impacts during drilling.

Mitigation Measure 8

The noise levels of pump station motors and other facilities at the Ella Way Well shall not exceed 50 dBA at the property lines. (This would ensure that Citrus Heights Municipal Noise Ordinance standards were met for adjacent existing residential uses.) At the time of well and equipment installation, adequate noise attenuation measures shall be provided to reduce noise levels to the 50-dBA standard. Motors and other noise producing equipment shall be shielded or enclosed to meet this standard. Compliance with this standard shall be demonstrated with pre- and post-construction noise measurements taken during test operations of project facilities. The implementation of noise attenuation measures shall be to the satisfaction of the CHWD.

4. PREPARERS OF THE INITIAL STUDY / NEGATIVE DECLARATION

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